



सत्यमेव जयते

# Indian Public Health Standards (IPHS) for 51 to 100 bedded Sub-District/Sub-Divisional Hospitals

January  
2007



Directorate General of Health Services  
**Ministry of Health & Family Welfare**  
Government of India



# COMMUNITY HEALTH CELL

*Library and Information Centre*

No. 367, Srinivasa Nilaya, Jakkasandra,  
I Main, I Block, Koramangala, Bangalore - 560 034.

THIS BOOK MUST BE RETURNED BY  
THE DATE LAST STAMPED

--	--	--

10202

## *Community Health Cell*

**Library and Information Centre**

# 359, "Srinivasa Nilaya"

Jakkasandra 1st Main,

1st Block, Koramangala,

BANGALORE - 560 034.

Ph : 2553 15 18 / 2552 5372

e-mail : chc@sochara.org



# Indian Public Health Standards (IPHS) for 51 to 100 bedded Sub-District/Sub-Divisional Hospitals

**January  
2007**



Directorate General of Health Services  
**Ministry of Health & Family Welfare**  
Government of India

For one lib  
for





# Indian Public Health Standards (IPHS)

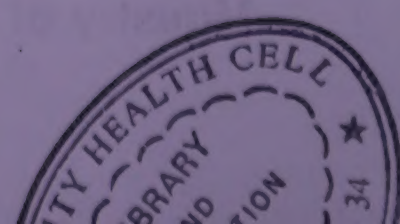
for

## 21 to 100 bedded 2nd-Divisional Hospitals

January  
2003

Ministry of Health & Family Welfare  
Government of India

PH-100





## Foreword

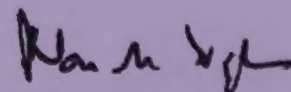
The Government of India is strongly committed to strengthen the whole range of public health infrastructure including Sub-district/Sub-divisional Hospitals for improving the availability and accessibility of affordable quality services to the people. Most of the existing Sub-district/Sub-divisional Hospitals require improvement of physical infrastructure as they are mostly located in old buildings, in towns, where there is no scope for more physical expansion of the building. There is shortfall of manpower, equipments, drugs and other logistics supply etc. too. Quality management and quality assurance procedures are also needed to make their functioning more effective, affordable and accountable.

A Sub-district/Sub-divisional Hospital has an important role to play as the First Referral Unit in providing emergency obstetrics care and neo-natal care and help in bringing down the maternal mortality and infant mortality. The National Rural Health Mission (NRHM) launched by the Hon'ble Prime Minister of India aims to restructure the health delivery mechanism in the rural areas. Formulation of Indian Public Health Standards (IPHS) is a step in the direction of achieving the level of quality that these Hospitals are expected to meet or aspire to.

The Indian Public Health Standards (IPHS) for Sub-district/Sub-divisional Hospitals has been worked out by constituting Expert Group comprising various stakeholders under the Chairmanship of Director General Health Services, Ministry of Health & Family Welfare, Government of India. These Standards have been prepared bed strength-wise for 31-50 beds and 51-100 beds. The Indian Public Health Standards (IPHS) for Sub-district/Sub-divisional Hospital has been prepared, keeping in view the minimum resources available and mention functional level of the Hospitals in terms of space, manpower, instruments, drugs and other basic health care services. Constitution of Rogi Kalyan Samittee/Management Committee with involvement of PRIs, Citizen Charter are expected to make improvement in the functioning and accountability of these Hospitals.

It is emphasized that setting Standards is a dynamic process and will require revision at regular intervals. It is hoped that this document will be useful to all the stake holders. Any comment for further improvement is most welcome.

I would like to acknowledge the efforts put in by the Director General of Health Services and Infrastructure Division in preparing the Guidelines.



(Naresh Dayal)

Secretary (H&FW)

Ministry of Health & Family Welfare

Government of India

New Delhi

Dated : 16<sup>th</sup> May, 2007



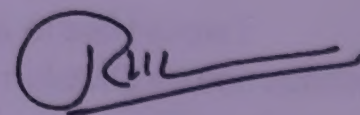
## Preface

Sub-district/Sub-divisional Hospitals act as the First Referral Units for provision of specialist services to the population from neighbouring Community Health Centres. They have an important role to play in providing emergency obstetrics care and neo-natal care and help in bringing down the maternal mortality and infant mortality. The Government of India through the National Rural Health Mission (NRHM) is committed to strengthen these Hospitals to a level of Indian Public Health Standards (IPHS).

Standards are a means of describing a level of quality that health care organizations are expected to meet or aspire to. The performance of these Hospitals can then be assessed against the set of Standards prescribed. Currently, the available Standards developed by the Bureau of Indian Standards (BIS) are short of ensuring community involvement, accountability and rights of citizens that are important for Public Hospitals. Therefore, for the first time under National Rural Health Mission (NRHM), an effort has been made to prepare Indian Public Health Standards (IPHS) for Sub-districts/Sub-divisional Hospitals in the country.

The Standards have been prepared in consultation with the Expert Group constituted for this purpose and taking in to consideration the minimum functional level needed for providing a set of assured services.

Setting Standards is a dynamic process and this document is not an end in itself. Further revision of Standards will occur as and when these Hospitals achieve a minimum functional grade. The contribution of the Expert Group members, and the efforts made by the Infrastructure Division of the Ministry of Health & Family Welfare in bringing out the first document of IPHS for Sub-district/Sub-divisional Hospitals is well appreciated. I hope that this document will be of immense help to the State governments and other stakeholders in bringing up these Hospitals to the level of Indian Public Health Standards.



(Dr. R.K. Srivastava)

Director General of Health Services  
Ministry of Health & Family Welfare  
Government of India

New Delhi

Dated: 16<sup>th</sup> May, 2007



## Acknowledgements

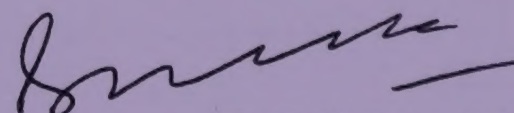
Indian Public Health Standards (IPHS) for the Sub-district/Sub-divisional Hospitals fulfill the needs of secondary referral care which may be useful as a referral document for the delivery of quality health care. The document is the result of efforts put in by both the government and non-government organizations. As the population and geographical size of the Sub-division varies in different States and UTs, an attempt has been made to formulate IPHS for hospitals having different bed strengths such as 31-50 and 51-100 bedded hospitals. This document contains the Standards set for 51-100 bedded hospital at Sub-district/Sub-divisional level.

I gratefully acknowledge the valuable contribution made by all the members of the Expert Group constituted to formulate Indian Public Health Standards (IPHS) for the Sub-district/Sub-divisional Hospitals. I am thankful to them individually and collectively.

I also gratefully acknowledge the initiative, encouragement and guidance provided by Dr. R.K. Srivastava, Director General of Health Services and Smt. S. Jalaja, Additional Secretary. The help and encouragement provided by Shri Amarjeet Sinha, Joint Secretary(H&FW), M/o Health & Family Welfare, Government of India is also gratefully acknowledged.

I would specifically like to thank Dr. R.N. Salhan, Addl D.G. and Medical Superintendent (Safdarjang Hospital), Dr. Shivlal, Additional D.G. and Director (NICD) and Shri S. Majumdar, Chief Architect, Bureau of Design, Ministry of Health & Family Welfare for their valuable contribution and guidance in formulating the IPHS for the Sub-district/Sub-divisional Hospitals.

The preparation of this document has been made possible by the assistance provided by Smt. Sushma Rath, Under Secretary (ID/PNDT) and the secretarial and typing assistance provided by Sh. Brij Mohan Singh Bhandari. The assistance provided by the staff of Rural Health Section of the M/o Health & Family Welfare is duly acknowledged.



(Dr. S.K. Satpathy)

Member Secretary – Expert Group  
Director

Central Health Education Bureau  
Directorate General of Health Services  
Ministry of Health & Family Welfare  
Government of India

New Delhi

Dated: 16<sup>th</sup> May, 2007



# Abstract

The purpose of this study was to investigate the effects of a 12-week training program on the physical and psychological health of sedentary middle-aged adults. The study was conducted in a laboratory setting and involved 30 participants who were randomly assigned to either a training group or a control group. The training group participated in a supervised exercise program consisting of three sessions per week, each lasting 45 minutes. The control group remained sedentary throughout the study. Physical health was assessed using a variety of measures, including heart rate, blood pressure, and body composition. Psychological health was assessed using a standardized questionnaire that measured levels of stress, anxiety, and depression. The results of the study showed that the training group experienced significant improvements in physical health, including a decrease in heart rate and blood pressure, and an increase in body mass index. Additionally, the training group also experienced significant improvements in psychological health, including a decrease in levels of stress, anxiety, and depression. These findings suggest that a 12-week training program can have positive effects on the physical and psychological health of sedentary middle-aged adults.

Dr. J. Smith  
Department of Health and Human Services  
1234 Main Street  
City, State, ZIP  
Phone: (123) 456-7890  
Email: jsmith@hhs.gov

Page 1 of 1  
Date: 10/10/2023



## Contents

1.	Introduction	1
2.	Objectives of IPHS for Sub-District Hospitals	2
3.	Definition of Sub-District Hospital	2
4.	Grading of Sub-District Hospital	2
5.	Functions	2
6.	Essential Services	3
7.	Physical Infrastructure	24
8.	Manpower	31
9.	Equipment	33
10.	Laboratory Services	47
11.	Recommended allocation of bed strength at various levels	49
12.	List of Drugs	50
13.	Capacity Building	66
14.	Quality Assurance in Services	66
15.	Rogi Kalyan Samities / Hospital Management Committee	66
16.	Citizen's Charter	66
	Annexure – I: Guidelines for Bio-Medical Waste Management	72
	Annexure – II: Reference Laboratory Networks	75
	List of Abbreviations	78
	References	79







## 1. Introduction

Sub-district (Sub-divisional) hospitals are below the district and above the block level (CHC) hospitals and act as First Referral Units. Specialist services are provided through these sub-district/district hospitals. These hospitals should play an important referral link between the Community Health Centres, Primary Health Centres and sub-centres. They have an important role to play as First Referral Units in providing emergency obstetrics care and neonatal care and help in bringing down the Maternal Mortality and Infant Mortality. It also saves the travel time for the cases needing emergency care and reduces the workload of the district hospital. In some of the states, each district is subdivided into two or three sub divisions. A subdivision hospital caters to about 5-6 lakhs people. In bigger districts the sub-district hospitals fills the gap between the block level hospitals and the district hospitals. There are about 1200 such hospitals in the country with a varying strength of number of beds ranging from 50 to 100 beds or more.

The Government of India is strongly committed to strengthen the health sector for improving the availability, accessibility of affordable quality health services to the people. In order to improve the quality and accountability of health services a set of standards need to be there for all health service institutions including sub-district hospitals.

Standards are a means of describing the level of quality that health care organizations are expected to meet or aspire to. The key aim of standard is to underpin the delivery of quality services which are fair and responsive to client's needs, which should be provided equitably and which deliver improvements in health and well being of the population. Standards are the main driver for continuous improvements in quality. The performance of Sub-district

hospitals can be assessed against a set of standards.

There has been effort to set standards for 30 and 100 bedded hospitals by the Bureau of Indian Standards (BIS). However, these standards are considered very resource intensive and lack the process to ensure community involvement, accountability and citizens charter issues that are important for public hospitals.

The National Rural Health Mission(NRHM) has given the opportunity to set Indian Public Health Standards(IPHS) for various health institutions at different levels right from Sub-centre to District Hospital level including Sub-district/Sub-divisional Hospitals.

The current effort is to prepare Indian Public Health Standards for the Sub-district Hospitals. Reference has been made to the BIS Standard for 100 bedded hospitals; Rationalisation of Service Norms for Secondary Care Hospitals prepared by Govt. of Tamil Nadu; District Health Facilities, Guidelines for Development and Operations, WHO, 1998 and Indian Public Health Standards (IPHS) for Community Health Centres. Setting standards is a dynamic process. This document contains the standards to bring the Sub-district Hospitals to a minimum acceptable functional grade with scope for further improvement in it. These standards are flexible as per the requirements and resources available to the concerned State/UT Government. The timeframe for implementation and achievement of these Standards could be extended for five years and to be done in phases.

Most of the existing hospitals below district level (51-100 Bed category) are located in older buildings in urbanized areas / towns as compared to most Primary Health Centres / Sub-centres. The expansions already done have resulted in construction touching the boundaries walls with no scope of further expansions. As far as possible,



States should not dislocate the said hospitals to a new location (in case of dislocating to a new location, the original client group will not be able to have same access to the desired health facilities)

## 2. Objectives of Indian Public Health Standards (IPHS) for Sub-District Hospitals:

The overall objective of IPHS is to provide health care that is quality oriented and sensitive to the needs of the people of the district. The specific objectives of IPHS for Sub District Hospitals are:

- i. To provide comprehensive secondary health care (specialist and referral services) to the community through the Sub District Hospital.
- ii. To achieve and maintain an acceptable standard of quality of care.
- iii. To make the services more responsive and sensitive to the needs of the people of the district and act as the First Referral Unit (FRU) for the hospitals/centers from which the cases are referred to the Sub District hospitals

## 3. Definition of Sub District hospitals

The term Sub District / Sub Divisional Hospital is used here to mean a hospital at the secondary referral level responsible for the Sub District / Sub Division of a defined geographical area containing a defined population.

## 4. Grading of Sub District hospitals

The size of a sub district hospital is a function of the hospital bed requirement, which in turn is a function of the size of the population it serves. In India the population size of a sub district varies from

1,00,000 to 5,00,000. Based on the assumptions of the annual rate of admission as 1 per 50 populations and average length of stay in a hospital as 5 days, the number of beds required for a sub district having a population of 5 lakhs will be around 100-150 beds. However, as the population of the sub district varies a lot, it would be prudent to prescribe norms by grading the size of the hospitals as per the number of beds.

Grade I: Sub District hospitals norms for 100 beds or more

Grade II: Sub District hospitals norms for 50 beds not exceeding 100 beds

The minimum functional grade of the two different grades of sub district hospitals requiring the physical infrastructure, manpower, diagnostic and investigation facilities, equipment norms, drugs and other supportive services etc. have been given.

## 5. Functions

A sub district hospital has the following functions:

1. It provides effective, affordable healthcare services (curative including specialist services, preventive and promotive) for a defined population, with their full participation and in co-operation with agencies in the district that have similar concern. It covers both urban population (sub divisional headquarter town) and the rural population of the sub division.
2. Function as a referral centre for the public health institutions below the district level such as Sub-divisional Hospitals, Community Health Centres, Primary Health Centres and Sub-centres.



3. Provide education and training for primary health care staff.

## 6. Essential Services (Minimum Assured Services)

Services include OPD, indoor, emergency services.

Secondary level health care services regarding following specialties will be assured at hospital:

**Consultation** services with following specialists:

General Medicine

General Surgery

O&G

Paediatrics

Emergency/A&E

Critical care

Anaesthesia

Ophthalmology

ENT

Dermatology and Venerology (Skin & VD) RTI/STI

Orthopaedics

Dental care

AYUSH

**Diagnostic** and other Para clinical services regarding:

Lab, X-ray, Ultrasound, ECG, Blood transfusion and storage, and physiotherapy

**Support services:** Following ancillary services shall be ensured:

- ◆ Medico legal/postmortem\*

- ◆ Ambulance services
- ◆ Dietary services
- ◆ Laundry services
- ◆ Security services
- ◆ Housekeeping and sanitation
- ◆ Waste management
- ◆ Office Management (Provision should be made for computerized medical records with anti-virus facilities whereas alternate records should also be maintained)
- ◆ Counseling services for domestic violence, gender violence, adolescents, etc. Gender and socially sensitive service delivery be assured.
- ◆ Inventory Management

\* Subject to location and District Headquarter.

## Financial powers of Head of the Institution

Medical Superintendent to be authorized to incur and expenditure up to Rs.15.00 lakhs for repair/upgrading of impaired equipments/instruments with the approval of executive committee of RKS. Financial accounting and auditing be carried out as per the rules along with timely submission of SOEs/UCs.

No equipment/instruments should remain non-functional for more than 30 days. It will amount to suspension of status of IPHS of the concerned institutions for absence period.

Outsourcing of services like laundry, ambulance, dietary, housekeeping and sanitation, waste disposal etc. to be arranged by hospital itself. Manpower and outsourcing work could be done through local tender mechanism.

Following services mix of procedures in medical and surgical specialties would be available:



## SERVICE MIX OF PROCEDURES IN MEDICAL AND SURGICAL SPECIALITIES

MEDICAL	
1	Pleural Aspiration
2	Skin scraping for fungus / AFB
3	Skin Biopsies
4	Abdominal tapping
OPD Procedures (Including IPD)	
1	Dressing (Small, Medium and Large)
2	Injection (I/M & I/V)
3	Catheterisation
4	Steam Inhalation
5	Cut down (Adult)
6	Enema
7	Stomach Wash
8	Douche
9	Sitz bath
10	Blood Transfusion
11	Hydrotherapy
12	Bowel Wash
Skin Procedures	
1	Chemical Cautery
2	Electro Cautery
3	Intra Lesional Injection
4	Biopsy
Paediatric Procedures	
1	Immunization (BCG, OPV, DPT, Measles, DT) / Children Ward / ORT corner
2	Services related to new borne care + all procedures as mentioned in IMNCI
2.1	- only cradle



2.2	- Incubator
2.3	- Radiant Heat Warmer
2.4	- Phototherapy
2.5	- Gases (oxygen)
2.10	- Cut down
2.12	- Ventilator
<b>Cardiology Procedures and Diagnostic Tests</b>	
1	ECG
2	Defibrillator Shock
3	Laproscope (Diagnostic and Therapeutic)
<b>Physiotherapy Services</b>	
<b>1</b>	<b>With Electrical Equipments</b>
1.1	- Short wave diathermy
1.2	- Electrical Stimulator
1.3	- Ultra Sonic Therapy
1.4	- Infra Red Lamp (Therapy)
1.5	- Electric Vibrator
<b>2</b>	<b>With Mechanical Gadgets/Exercises</b>
2.1	- Mechanical Traction (Lumbar & Cervical)
2.2	- Exercycle
2.3	- Shoulder Wheel
2.4	- Walking Bars
2.5	- Post Polio Exercise
<b>Eye Specialist Services (Ophthalmology)</b>	
<b>1</b>	<b>OPD Procedures</b>
1.1	- Refraction (by using snellen's chart)
	- Prescription for glasses using Trial frame.
1.2	- Syringing and Probing



1.3	- Foreign Body Removal (conjunctival)
1.4	- Foreign Body Removal (Corneal)
1.5	- Epilation
1.6	- Suture Removal
1.7	- Subconj Injection
1.8	- Retrobulbar Injection (Alcohol etc.)
1.9	- Tonometry
1.10	- Pterygium Excision
1.11	- Syringing & Probing
1.12	- I & C of chalazion
1.13	- Wart Excision
1.14	- Styte
1.15	- Cauterization (Thermal)
1.16	- Conjunctival Resuturing
1.17	- Corneal Scarping
1.18	- I & D Lid Abscess
1.19	- Uncomplicated Lid Tear
1.20	- Indirect Ophthalmoscopy
1.21	- Retinoscopy
<b>2</b>	<b>IPD Procedures</b>
2.1	- Cataract Extraction
2.2	- Glaucoma (Trabeculectomy)
2.3	- Small Lid Turnour Excision
2.4	- Conjunctival Cyst
<b>ENT Services</b>	
<b>1</b>	<b>OPD Procedures</b>
1.1	- Foreign Body Removal (Ear and Nose)



1.2	- Syringing of Ear
1.3	- Chemical Cauterization (Nose & Ear)
1.4	- Eustachian Tube Function Test
1.5	- Vestibular Function Test/Caloric Test
<b>2</b>	<b>Minor Procedures</b>
2.1	- Therapeutic Removal of Granulations (Nasal, Aural, Oropharynx)
2.2	- Cautrization (Oral, Oropharynx, Aural & nasal)
<b>3</b>	<b>Nose Surgery</b>
3.1	- Packing (Anterior & Posterior Nasal)
3.2	- Antral Punchure (Unilateral & Bilateral)
3.3	- I & D Septal Abscess (Unilateral & Bilateral)
3.4	- S M R
3.5	- Septoplasty
3.6	- Fracture Reduction Nose
3.7	- Fracture Reduction Nose with Septal Correction
<b>4</b>	<b>Ear Surgery</b>
4.1	- Ear Piercing
4.2	- Hearing Aid Analysis and Selection
<b>5</b>	<b>Throat Surgery</b>
5.1	- Adenoidectomy
5.2	- Tonsillectomy
5.3	- Adenoidectomy + Tonsillectomy
5.4	- Tongue Tie excision
<b>6</b>	<b>Endoscopic ENT Procedures</b>
6.1	- Direct Laryngoscopy
6.2	- Hypopharyngoscopy
6.3	- Broncoscopic Diagnostic



6.4	- Broncoscopic & F B Removal
<b>7</b>	<b>General ENT Surgery</b>
7.1	- Sticking of LCW (Nose & Ear)
7.2	- Preauricular Sinus Excision
7.3	- Tracheostomy
<b>8</b>	<b>Audiometry</b>
8.1	- Audiogram (Pure tone and Impedence)
<b>Obstetric &amp; Gynecology Specialist Services</b>	
1	Episiotomy
2	Forceps delivery, <b>VECC</b>
3	Craniotomy-Dead Fetus/Hydrocephalus
4	Caeserean section
5	Female Sterilisation ( Mini Laparotomy & Laparoscopic)
6	D&C
7	MTP
8	Bartholin Cyst Excision
9	Suturing Perimeal Tears
10	Assisted Breech Delivery
11	Cervical Cautery
12	Nomal Delivery
13	Cassarian
14	E U A
15	Midtrimestor Abortion
16	Ectopic Pregnancy Ruptured
17	Retain Placenta
18	Suturing Cervical Tear
19	Assisted Twin Delivery



**Dental Services**

- |    |   |
|----|---|
| 1  | Dental Caries/Dental Abcess/Gingivitis  |
| 2  | Periodontitis <ul style="list-style-type: none"> <li>▼ Cleaning</li> <li>▼ Surgery</li> </ul> |
| 3  | Minor Surgeries, Impaction, Flap  |
| 4  | Trauma including Vehicular Accidents  |
| 5  | Sub Mucus Fibrosis (SMF)  |
| 6  | Scaling and Polishing   |
| 7  | Root Canal Treatment  |
| 8  | Extractions   |
| 9  | Light Cure  |
| 10 | Amalgum Filling (Silver)  |
| 11 | Sub Luxation and Arthritis of Temporomandibular Joints  |
| 12 | Pre Cancerous Lesions and Leukoplakias  |
| 13 | Intra oral X-ray  |
| 14 | Complicated Extractions (including suturing of gums)  |

**SURGICAL**

- |    |   |
|----|---|
| 1  | Abcess drainage including breast & perianal |
| 2  | Wound Debridement                           |
| 3  | Appendicectomy                              |
| 4  | Fissurotomy or fistulectomy                 |
| 5  | Hemorrohoidectomy                           |
| 6  | Circumcision                                |
| 7  | Hydrocele surgery                           |
| 8  | Herniorraphy                                |
| 9  | Suprapubic Cystostomy                       |
| 10 | Diagnostic Laparoscopy                      |
| 11 | Cysts and Benign Tumour of the Palate       |
| 12 | Excision Submucous Cysts                    |



**Breast**

- |   |                              |
|---|------------------------------|
| 1 | Excision fibroadenoma – Lump |
|---|------------------------------|

**Hernia**

- |   |  |
|---|--|
| 1 | Ingunial Hernia repair reinforcement               |
| 2 | Ingunial Hernia repair with mesh                   |
| 3 | Femoral Hernia repair                              |
| 4 | Recurrent Ingunial Hernia repair                   |
| 5 | Strangulated Ventral or Incisional Hernia/Ingunial |

**Abdomen**

- |   |                                    |
|---|------------------------------------|
| 1 | Exploratory Laparotomy             |
| 2 | Gastrostomy or Jejuncstomy         |
| 3 | Simple Closure of Perforated Ulcer |
| 4 | Burst Abdomen Repair               |

**Appendix**

- |   |                               |
|---|-------------------------------|
| 1 | Emergency Appendisectomy      |
| 2 | Interval Appendisectomy       |
| 3 | Appendicular Abscess Drainage |

**Small Intestine**

- |   |                                     |
|---|-------------------------------------|
| 1 | Resection and Anastomosis           |
| 2 | Multiple Resection and Anaestomosis |
| 3 | Intestinal Performation             |

**Liver**

- |   |   |
|---|---|
| 1 | Open Drainage of liver abscess                  |
| 2 | Drainage of Subdia, Abscess/Perigastric Abscess |

**Biliary System**

- |   |   |
|---|---|
| 1 | Cholecystostomy                         |
| 2 | Cholecystectomy                         |
| 3 | Cholecystectomy and Choledocholithotomy |



**Colon, Rectum and Anus**

1	Fistula in ane low level
2	Fistula in ane high level
3	Catheters
4	IV Sets
5	Colostomy Bags
6	Perianal Abscess
7	Ischiorectal Abscess
8	Ileostomy or colostomy alone
9	Haemorrhoidectomy
10	Anal Sphincter Repair after injury
11	Resection anastomosis

**Penis, Testes, Scrotum**

1	Circumcision
2	Partial amputation of Penis
3	Total amputation of Penis
4	Orchidopexy (Unilateral & Bilateral)
5	Orchidectomy (Unilateral & Bilateral)
6	Hydrocele (Unilateral & Bilateral)
7	Excision of Multiple sebaceous cyst of scrotal skin
8	Reduction of Paraphimosis

**Other Procedures**

1	Suture of large laceration
2	Suturing of small wounds
3	Excision of sebaceous cyst
4	Small superficial tumour
5	Repair torn ear lobule each
6	Incision and drainage of abscess



7	Injection Haemorrhoids/Ganglion/Keloids
8	Removal of foreign body (superficial)
9	Removal of foreign body (deep)
10	Excision Multiple Cysts
11	Tongue Tie
12	Debridment of wounds
13	Excision carbuncle
14	Ingrowing Toe Nail
15	Diabetic Foot Asnd carbuncle
<b>Urology</b>	
1	Pyelolithotomy
2	Nephrolithotomy
3	Simple Nephrostomy
4	Uretrolithotomy
5	Open Prostatectomy
6	Cystolithotomy Superopubic
7	Dilatation of stricture urethra under GA
8	Dilatation of stricture urethra without anaesthesia
9	Meatotomy
10	Trocar Cystostomy
<b>Plastic Surgery</b>	
1	Burn Dressing Small, medium (10% to 30%), large 30% to 60%, extensive > 60%
2	Ear lobules repair one side (bilateral)
3	Simple wound
4	Complicated wound
5	Simple injury fingers
6	Multiple finger injury
7	Crush injury hand



8	Polio Surgery
9	Surgery concerning disability with Laprosy
10	Surgery concerning with TB
<b>Paediatric Surgery</b>	
1	Minor Surgery, I & D, Prepuceal Dilatation, Meatotomy
<b>Orthopaedic Surgery</b>	
1	<b>Hip Surgery</b>
2	Femoral Neck nailing with or without plating replacement prosthesis / Upper Femoral Osteotomy; Innominate Osteotomy/Open Reduction of Hip dislocation; DHS/Richard Screw Plate
3	Synovial or bone biopsy from HIP
4	Girdle stone Arthroplasty
5	<b>Fractures</b>
6	Open reductuin int, fixation or femur, tibia, B. Bone, Forarm Humerus inter-condylar fracture of humerus and femur and open reduction and int. Fixation bimaleolar fracture and fracture dialocation of ankle montaggia fracture dialocation
7	Medial condyle of humerus fracture lateral condyle of humerus Olecranen fracture, head of radius lower end of radius, medial malleolus patella fracture and fracture of calcaneum talus single forearm, bone fracture
8	Ext. fixation of hand & foot bones
9	Tarsals, Metatarsals, Phalanges carpals, Metacarples, excision head fibula, lower and of Inia
10	Interlocking nailing of long bones
11	Debridement & Secondary closure
12	Percutaneous Fixation (small and long bones)
13	<b>Closed Reduction</b>
14	Hand, Foot bone and cervicle
15	Forearm or Arm, Leg, Thigh, Wrist, Aknle
16	Dislocation elbow, shoulder, Hip, Knee
17	Closed Fixation of hand / foot bone
18	Ingrowing toe-nail



## RECOMMENDED SERVICE MIX (SUGGESTED ACTIONS) FOR DIFFERENT ILLNESSES CONCERNING DIFFERENT SPECIALITIES:

### Obstetric & Gynecology

S. No	NAME OF THE ILLNESS	RECOMMENDED SERVICE MIX (SUGGESTED ACTIONS)
1	Bleeding during first trimester	Treat
2	Bleeding during second trimester	Treat
3	Bleeding during third trimester	Treat
4	Normal Delivery	Yes
5	Abnormal labour (Mal presentation, prolonged labour, PROM, Obstructed labour )	Treat / Refer
6	PPH	Treat and refer if necessary
7	Puerperal Spesis	Treat and refer if necessary
8	Ectopic Pregnancy	Diagnose & refer if necessary
9	Hypertentive disorders	Conservative management and follow - up servcies
10	Septic abortion	Treat and refer if necessary
11	Medical disorders complicating pregnancy ( heart disease, diabetes, hepatitis )	Diagnose and refer
12	Bronchial asthma	Diagnose , first aid and delivery

### Gynecology

1	RTI / STI	Treat
2	DUB	Treat and refer if necessary
3	Benign disorders (fibroid, prolapse, ovarian masses)	Diagnose and refer
	Initial investigation at PHC / Gr III level	
4	Breast Tumors	Refer
5	Cancer Cervix screening	Collection of PAP SMEAR and biopsy
	Initial investigation at PHC / Grade III level	
6	Cancer cervix /ovarian Initial investigation at PHC / Gr III level	Diagnose and refer
7	Infertility	Investigate and refer
8	Prevention of MTCT	Refer
9	MTP / MVA services	Treat
10	Tubectomy	Yes



**GENERAL MEDICINE**

<b>S. No</b>	<b>NAME OF THE ILLNESS</b>	<b>RECOMMENDED SERVICE MIX (SUGGESTED ACTIONS)</b>
1	Fever -a) Short duration (<1 week)	Basic investigation and Treatment
	Fever -b) Long duration (>1 week)	Investigation and treatment
		Refer if necessary
	c) Typhoid	Treat
	d) Malaria / Filaria	Treat
	e) Pulmonary Tuberculosis.	Treat
	f) Viral Hepatitis	Treat
	g) Leptospirosis / Meningitis and Haemorrhagic fever	Refer to Gr-I / G-II District level
	h) Malignancy	Refer to Gr-I / G-II District
2	<b>COMMON RESP. ILLNESSES :</b>	
	Bronchial Asthma / Pleuraleffusion / Pneumonia / Allergic	Diagnose and Treat
	Bronchitis/COPD	
3	<b>COMMON CARDIAC PROBLEMS</b>	
	a) Chest pain (IHD)	Treat and decide further management
	b) Giddiness (HT)	Diagnose and treat
4	<b>G I TRACT</b>	
	a) G I Bleed / Portal hypertension / Gallbladder disorder	Emergencies - Ref. To Gr-II / Gr-I - District Hospital
	b) AGE / Dysentery / Diarrhoeas	Treat
5	<b>NEUROLOGY</b>	
	a) Chronic Hpeadache	Ref. To Gr - I sub district
	b) CVA/TIA/Hemiplegia/ Paraplegia	Ref. To Gr - I / G-II district
6	<b>HAEMATOLOGY</b>	
	a) Anaemia	Basic investigation and Treatment
		Refer if necessary
	b) Bleeding disorder	Stabilise Ref. To tertiary
	c) Malignancy	Ref. To Gr - I / G-II district
7	<b>Communicable Diseases</b>	
	Cholera, Measles, Mumps, and Chickenpox	Treat
8	<b>Psychological Disorders</b>	
	Acute psychosis / Obsession / Anxiety neurosis	Screening, emergency care and referral



**PAEDIATRICS**

<b>S. No</b>	<b>NAME OF THE ILLNESS</b>	<b>RECOMMENDED SERVICE MIX (SUGGESTED ACTIONS)</b>
1	ARI/ Bronchitis Asthmatic	Investigate, Diagnose, Nebulizator Treat & Refer if no improvement
2	Diarrohoeal Diseases	Diagnose Treat (ORS, IVF), <b>ORT Corner</b> Refer if no improvement
3	Protein Energy Malnutrition and Vitamin Deficiencies	Diagnose, Treat, & Refer
4	Pyrexia of unknown origin improvement	Investigate, diagnose, treat, refer if no improvement
5	Bleeding Disorders	Treat
6	Diseases of Bones and Joints	Treat
7	Childhood Malignancies	Early Diagnosis and Refer
8	Liver Disorders	Diagnose and Refer
9	Paediatric Surgical Emergencies	Early Diagnosis and Refer
10	Poisoning, Sting, Bites	First Aid - Refer

<b>S. No</b>	<b>NAME OF THE ILLNESS</b>	<b>RECOMMENDED SERVICE MIX (SUGGESTED ACTIONS)</b>
<b>NEONATALOLOGY</b>		
1	Attention at birth (to prevent illness)	5 cleans warm chain
2	Hypothermia	Warm chain
3	Birth asphyxia	Resuscitation And Treatment
4	Hypoglycemia	Treat
5	Meconium aspiration syndrome	Treat
6	Convulsions (seizures)	Treat and Refer
7	Neonatal Sepsis	Treat
8	LBW	1800-1500 gms treat with kangaroo care below that refer
9	Neonatal Jaundice	Treat
10	Preterm	Warm chain, feeding, kangaroo care
11	Congenital malformations	Examine and refer
12	R.D.S, ARI	Manage and Refer
13	Dangerously ill baby	Identify and manage
14	Feeding Problems	Identify and manage
15	Neonatal Diarrhoea	Diagnosis and manage
16	Birth injury	Minor -manage; major -refer



17	Neonatal Meningitis	Manage and Refer
18	Renal problems/Congenital heart disease/Surgical emergencies	Refer
19	HIV/AIDS	Follow up and refer to ART Center
20	Hypocalcemia	Manage
21	Metabolic Disorders	Identify & Refer
22	Hyaline Membrane diseases	diagnose and refer
23	Neonatal Malaria	Manage
24	Blood disorders	Manage
25	Developmental Delays	CBR
26	UTIs	Manage & refer
27	Failure to Thrive	Manage & Refer

## DERMATOLOGY

S. No	NAME OF THE ILLNESS	RECOMMENDED SERVICE MIX (SUGGESTED ACTIONS)
1	<b>Infections</b>	
	a) <b>Viral</b> - HIV Verrucca Molluscum Contagiosa	Treat
	Pityriasis Rosea, LGV, HIV	Treat
	b) <b>Bacteria</b>	
	Pyoderma	Treat
	Chancroid	
	Gonorrhea, Leprosy & Tuberculosis	Treat
	c) <b>Fungal</b>	
	Sup.Mycosis	Identify / Treat
	Subcut - Mycetoma	and refer
	d) <b>Parasitic Infestation</b>	
	Scabies / Pediculosis/Larva Migrans	Treat
	e) <b>Spirochaetes</b>	
	Syphilis	Diagnosis and Treat
2	<b>Papulosquamous</b>	
	Psoriasis (classical)- uncomplicated/Lichen Planus	Treat
3	<b>Pigmentary Disorder</b>	
	Vitiligo	Treat / Refer
4	<b>Keratinisation Disorder</b>	
	Ichthyosis/Traumatic Fissures	Refer / Treat



5	<b>Autoimmune</b> Collagen Vascular DLE, Morphea	Treat / Refer
6	<b>Skin Tumors</b> , Seb.Keratosis, Soft Fibroma, Benign Surface,Tumors / Cysts, Appendageal Tumors	Treat
7	<b>Miscellaneous</b> a) Acne Vulgaris, Miliaria, Alopecia, Nail disorder, Toxin induced	Treat
	b) Leprosy - Resistant/ Complications / reaction Allergy - EMF / SJS / TENPsoriasis/Collagen Vascular/Auto immune Disorders	Treat /Refer
	c) Deep Mycosis, STD Complications	Treat /Refer
	d) Genetically Determined Disorders	Refer

**CHEST DISEASES**

S. No	NAME OF THE ILLNESS	RECOMMENDED SERVICE MIX (SUGGESTED ACTIONS)
1	Fever	Investigation and Treatment
2	Cough with Expectoration / Blood Stained	Treatment
3	Hemoptysis	Investigation and Treatment
4	Chest Pain	ECG, X ray treatment
5	Wheezing	Treatment, PFT
6	Breathlessness	Treatment PFT, X-ray

**PSYCHIATRY**

S. No	NAME OF THE ILLNESS	RECOMMENDED SERVICE MIX (SUGGESTED ACTIONS)
1	Schizophrenia	Follow up
2	Depression	Follow up
3	Mania	Follow up
4	Anxiety Disorders	Follow up
5	Mental Retardation	Follow up
6	Other Childhood Disorders	Follow up
7	Alcohol and Drug Abuse	Follow up
8	Dementia	Follow up



**DIABETOLOGY**

SI. No	NAME OF THE ILLNESS	RECOMMENDED SERVICE MIX (SUGGESTED ACTIONS)
1	Screening for Diabetes	Diagnose and Treat
2	Gestational Diabetes/DM with Pregnancy	Diagnose and Treat
3	DM with HT	Diagnose and Treat
4	Nephropathy/Retinopathy	Diagnose and Refer
5	Neuropathy with Foot Care	Diagnose & Treat
6	Emergency :- i) Hypoglycemia ii) Ketosis iii) Coma	Diagnose and Treat

**NEPHROLOGY**

S. No	NAME OF THE ILLNESS	RECOMMENDED SERVICE MIX (SUGGESTED ACTIONS)
1	Uncomplicated UTI	Treat
2	Nephrotic Syndrome - Children/ Acute Nephritis	Treat
3	Nephrotic Syndrome - Adults	Refer to tertiary
4	HT, DM	Treat
5	Asymptomatic Urinary Abnormalities	Refer to the District
6	Nephrolithiasis	Refer to District Hospital
7	Acute renal Failure/ Chronic Renal Failure	Suspect / Refer to District level
8	Tumors	Refer to Tertiary

**NEURO MEDICINE AND NEURO SURGERY**

S. No	NAME OF THE ILLNESS	RECOMMENDED SERVICE MIX (SUGGESTED ACTIONS)
1	Epilepsy	First Aid, Referral for investigation, Follow-up
2	C.V.A.	First Aid, Referral for investigation, Follow-up
3	Infections	Investigations and Treatment complicated Refer
4	Trauma	Treat simple injuries Refer complicated cases
5	Chronic headache	Referral
6	Chronic Progressive Neurological disorder	Referral



## GENERAL SURGERY

S. No	Major Classification	NAME OF THE ILLNESS	RECOMMENDED SERVICE MIX (SUGGESTED ACTIONS)
1	<b>Basic Techniques</b>	<b>a. Minor Cases</b> under LA Abcess I&D/Suturing,Biopsy / Excision of Lipoma / Ganglion / Lymph Node, Seb-Cyst / Dermoid / Ear Lobe Repair / Circumcision	Treat
		<b>b. FNAC Thyroid, Breast Lumps,</b> Lymphnodes, Swelling	Diagnosis / Treatment
2	<b>Elective Surgeries</b>	<b>a. Genitourinary tract</b> Hydrocele,Hernia, Circumcision, Supra pubic cystostomy,	Treat
		<b>b. Gastrointestinal disorder</b> Appendicitis/Anorectal abscesses/Rectal prolapse/Liver abscess/Haemorrhoids/Fistula	Treat
3	<b>Emergency surgeries</b>	Assault injuries/Bowel injuries/Head injuries/Stab injuries/Multiple injuries/Perforation/Intestinal obstruction	Treat
4	<b>Benign/ Malignant Diseases</b>	Breast/Oral/GI tract/Genitourinary (Penis, Prostate, Testis)	Diagnose & refer
5	<b>Others</b>	<b>Thyroid, Varicose veins</b>	Treat
6	<b>Burns</b>	<b>Burns</b> < 15%	Treat
		>15%	Treat
7	<b>Medico legal</b>	a) Assault / RTA, b) Poisonings, c) Rape	AR Entry / Treat
		d) Postmortem	Done



**OPHTHALMOLOGY**

S. No	NAME OF THE ILLNESS	RECOMMENDED SERVICE MIX (SUGGESTED ACTIONS)
1	Superficial Infection	Treatment with drugs
2	Deep Infections	Treat
3	Refractive Error	Treat
4	Glaucoma	Treat
5	Eye problems following systemic disorders	Treat
6	Cataract	Treat
7	Foreign Body and Injuries	Treat
8	Squint and Amblyopia/Corneal Blindness(INF,INJ,Leucoma)/ Oculoplasty	Refer
9	Malignancy/Retina Disease	Refer
10	Paediatric Ophthalmology	Refer

**EAR, NOSE, THROAT**

S. No	NAME OF THE ILLNESS	RECOMMENDED SERVICE MIX (SUGGESTED ACTIONS)
<b>EAR</b>		
1	ASOM/SOM/CSOM	Treat
2	Otitis External / Wax Ears	Treat
3	Polyps	Diagnose and Refer
4	Mastoiditis	Treatment (Medical)
5	Unsafe Ear	Diagnose and Refer
<b>THROAT</b>		
1	Tonsillitis/Pharyngitis/Laryngitis	Treat
2	Quinsy	Diagnose and Refer
3	Malignancy Larynx	Diagnose and Refer
4	Foreign Body Esophagus	Diagnose and Refer
<b>NOSE</b>		
1	Epistaxis	First aid & Refer
2	Foreign Body	Treat (Removal) and refer if needed
3	Polyps	Refer
4	Sinusitis	Treat (Medical)
5	Septal Deviation	Treat (Symptomatic)



## ORTHOPADICS

S. No	NAME OF THE ILLNESS	RECOMMENDED SERVICE MIX (SUGGESTED ACTIONS)
1	Osteomyelitis	Treat
2	Rickets /Nutritional Defeciciencies	Detection Manage
3	Poliomyelitis with residual Deformities/JRA/RA	Corrective Surgery / Physiotherapy
4	RTA/Polytrauma	Manage

## UROLOGY

S. No.	NAME OF THE ILLNESS	RECOMMENDED SERVICE MIX (SUGGESTED ACTIONS)
<b>CHILDREN</b>		
1	Hydronephrosis	Diagnose and refer
2	Urinary Tract Injuries	Diagnose and refer
3	PUV/ Posterior Urethral Valve	Diagnose and refer
4	Cystic Kidney	Diagnose and refer
5	Urinary Obstruction	Urethral Catheter Insertion Referral
6	Undesended Testis	Diagnose and refer
7	Hypospadias and Epispadias	Diagnose and refer
8	Mega Ureter	Diagnose and refer
9	Extrophy	Diagnose and refer
10	Tumours - Urinary Tact	Diagnose and refer
<b>ADULT</b>		
	All above and	
1	Stricture Urethra	Diagnose and refer
2	Stone Diseases	Diagnose and refer
3	Cancer - Urinary and Genital Tract	Diagnose and refer
4	Trauma Urinary Tact	Diagnose and refer
5	GUTB	Diagnose and refer
<b>OLD AGE</b>		
1	Prostate Enlargement and Urinary Retention	Urethral Catheter Insertion Referral
2	Stricture Urethra	Diagnose and refer
3	Stone	Diagnose and refer
4	Cancer (Kidney, Bladder, Prostate, Testis, Penis and Urethra)	Diagnose and refer
5	Trauma Urinary Tract	Diagnose and refer



**DENTAL SURGERY**

<b>S. No</b>	<b>NAME OF THE ILLNESS</b>	<b>RECOMMENDED SERVICE MIX (SUGGESTED ACTIONS)</b>
1	Dental Caries/Dental Abscess/Gingivitis	Treat
2	Cleaning: - Periodontitis - Surgery	Treat
3	Minor Surgeries, Impaction, Flap	Cleaning Treat Surgery if necessary and refer
4	Malocclusion	Refer
5	Prosthodontia (Prosthetic Treatment)	Treat with appliances
6	Trauma	Treat
7	Maxillo Facial Surgeries	Refer
8	Neoplasms	Refer



## 7. PHYSICAL INFRASTRUCTURE

### 7.1 Size of the hospital:

The size of a district hospital is a function of the hospital bed requirement which in turn is a function of the size of the population served. In India the population size of a district varies from 50,000 to 15,00,000. For the purpose of convenience the average size of the district is taken in this document as one million populations. Based on the assumptions of the annual rate of admission as 1 per 50 populations. And average length of stay in a hospital as 5 days. The number of beds required for a district having a population of 10 lakhs will be as follows:

The total number of admissions per year =  $10,00,000 \times 1/50 = 20,000$

Bed days per year =  $20,000 \times 5 = 100,000$

Total number of beds required when occupancy is 100% =  $100000/365 = 275$

Total number of beds required when occupancy is 80% =  $100000/365 \times 80/100$

### 7.2 Area of the hospital:

An area of 65-85 m<sup>2</sup> per bed has been considered to be reasonable. The area will include the service areas such as waiting space, entrance hall, registration counter, etc. In case of specific requirement of a hospital, flexibility in altering the area be kept.

### 7.3 Site information:

Physical description of the area which should include bearings, boundaries, topography, surface area, land used in adjoining areas, limitation of the site that would affect planning, maps of vicinity and landmarks or centers, existing utilities, nearest city, port, airport, railway station, major bus stand,

rain fall and data on weather and climate. Hospital Management Policy should emphasize on quake proof, fire proof and flood proof buildings. Infrastructure should be eco-friendly and disabled (physically and visually handicapped) friendly. Provision should be made for water harvesting, generating back-up, solar energy / power back-up, and horticulture services including herbal garden. Local agency Guidelines and By-laws should strictly be followed. A room for horticulture to store garden implements, seeds etc will be made available.

### 7.4 Factors to be considered in locating a district hospital

- ◆ The location may be near the residential area.
- ◆ Too old building may be demolished and new construction done in its place.
- ◆ It should be free from dangers of flooding; it must not, therefore, be sited at the lowest point of the district.
- ◆ It should be in an area free of pollution of any kind, including air, noise, water and land pollution.
- ◆ It must be serviced by public utilities: water, sewage and storm-water disposal, electricity, gas and telephone. In areas where such utilities are not available, substitutes must be found, such as a deep well for water, generators for electricity and radio communication for telephone.
- ◆ Necessary environmental clearance will be taken.
- ◆ Disability Act will be followed.

### 7.5 Site selection criteria

A rational, step-by-step process of site selection occurs only in ideal circumstances. In



some cases, the availability of a site outweighs other rational reasons for its selection, and planners and architects are confronted with the job of assessing whether a piece of land is suitable for building a hospital. In the case of either site selection or evaluation of adaptability, the following items must be considered: size, topography, drainage, soil conditions, utilities available, natural features and limitations.

## **7.6 In the already existing structures of a district hospital**

- ◆ It should be examined whether they fit into the design of the recommended structure and if the existing parts can be converted into functional spaces to fit in to the recommended standards.
- ◆ If the existing structures are too old to become part of the new hospital, could they be converted to a motor pool, laundry, store or workshop or for any other use of the district hospital.
- ◆ If they are too old and dilapidated then they must be demolished. And new construction should be put in place.

## **7.7. Building and Space Requirements**

### **Administrative Block:**

Administrative block attached to main hospital along with provision of MS Office and other staff will be provided.

### **Circulation Areas**

Circulation areas like corridors, toilets, lifts, ramps, staircase and other common spaces etc. in the hospital should not be more than 55% of the total floor area of the building.

### **Floor Height**

The room height should not be less than approximately 3.6 m measured at any point from floor to floor height.

### **Entrance Area**

#### **Physical Facilities**

### **Ambulatory Care Area (OPD)**

#### **Waiting Spaces**

Registration, assistance and enquiry counter facility be made available in all the clinics.

Main entrance, general waiting and subsidiary waiting spaces are required adjacent to each consultation and treatment room in all the clinics.

### **Clinics**

The clinics should include general, medical, surgical, ophthalmic, ENT, dental, obstetric and gynaecology, paediatrics, dermatology and venereology, psychiatry, neonatology, orthopaedic and social service department. The clinics for infectious and communicable diseases should be located in isolation, preferably, in remote corner, provided with independent access. For National Health Programme, adequate space be made available.

### **Nursing Services**

Various clinics under Ambulatory Care Area require nursing facilities in common which include dressing room, side laboratory, injection room, social service and treatment rooms, etc.

### **Nursing Station:**

On an average, one nursing station per ward will be provided. However, it should be



ensured that nursing station caters to about 40-45 beds. Out of these half will be for acute and chronic patients.

## Diagnostic Services

### Imaging

Role of imaging department should be radio-diagnosis and ultrasound along with hire facilities depending on the bed strength. The department should be located at a place which is accessible to both OPD and wards and also to operation theatre department. The size of the room should depend on the type of instrument installed. The room should have a sub-waiting area with toilet facility and a change room facility, if required. Film developing and processing (dark room) shall be provided in the department for loading, unloading, developing and processing of X-ray films. Separate Reporting Room for doctors should be there.

### Clinical Laboratory

For quick diagnosis of blood, urine, etc., a small sample collection room facility shall be provided.

Separate Reporting Room for doctors should be there.

### Blood Bank

Blood bank shall be in close proximity to pathology department and at an accessible distance to operation theatre department, intensive care units and emergency and accident department. Blood Bank should follow all existing guidelines and fulfill all requirements as per the various Acts pertaining to setting up of the Blood Bank.

Separate Reporting Room for doctors should be there.

## Intermediate Care Area (Inpatient Nursing Units)

### General

Nursing care should fall under following categories:

General Wards: Male / Female

Private Wards

Wards for Specialities

Depending upon the requirement of the hospital and catchment area, appropriate beds may be allowed for private facility. 10% of the total bed strength is recommended as private wards beds.

### Location

Location of the ward should be such to ensure quietness and to control number of visitors.

### Ward Unit

The basic aim in planning a ward unit should be to minimize the work of the nursing staff and provide basic amenities to the patients within the unit. The distances to be traveled by a nurse from bed areas to treatment room, pantry etc. should be kept to the minimum. Ward unit will include nursing station, doctors' duty room, pantry, isolation room, treatment room, nursing store along with wards and toilets as per the norms. On an average one nursing station per ward will be provided. It should be ensure that nursing station caters to above 40-45 beds, out of which half will be for acute and chronic patients.

### Private ward:

Depending upon the requirement of the hospital and catchment area appropriate beds may be allocated for private facilities. However, 10% of the total bed strength is recommended as private wards beds.



## Pharmacy (Dispensary)

The pharmacy should be located in an area conveniently accessible from all clinics. The size should be adequate to contain 5 percent of the total clinical visits to the OPD in one session.

Pharmacy should have component of medical store facility for indoor patients and separate pharmacy with accessibility for OPD patients.

## Intensive Care Unit and High Dependency Wards

### General

In this unit, critically ill patients requiring highly skilled life saving medical aid and nursing care are concentrated. Critically ill patients may be kept for supportive therapy at this hospital and as soon as they are stabilized, they may be expeditiously transferred to tertiary care centres. These should include major surgical and medical cases, head injuries, severe haemorrhage, acute coronary occlusion, kidney and respiratory catastrophe, poisoning etc. It should be the ultimate medicare the hospital can provide with highly specialized staff and equipment. The number of patients requiring intensive care may be about 2 to 5 percent total medical and surgical patients in a hospital. The unit shall not have less than 4 beds nor more than 12 beds. Number of beds will be restricted to 5% of the total bed strength. Out of these, they can be equally divided among ICU and High Dependency Wards. For example, in a 500-bedded hospital, total of 25 beds will be for Critical Care. Out of these, 13 may be ICU beds and 12 will be allocated for High Dependency Wards. Changing room should be provided for.

### Location

This unit should be located close to operation theatre department and other essential departments, such as, X-ray and pathology so that the staff and ancillaries could be shared. Easy and

convenient access from emergency and accident department is also essential. This unit will also need all the specialized services, such as, piped suction and medical gases, uninterrupted electric supply, heating, ventilation, central air conditioning and efficient life services. A good natural light and pleasant environment would also be of great help to the patients and staff as well.

Number of beds for both the units will be restricted to 5% of the total bed strength. Out of these, they can be equally divided among ICU and High Dependency Wards. For example, in a 500 bedded hospital, total of 25 beds will be for critical care. Out of these 13 may be ICU beds and 12 will be allocated for high dependency wards.

### Facilities

Nurses Station  
Clean Utility Area  
Equipment Room

## Critical Care Area (Emergency Services)

It should preferably have a distinct entry independent of OPD main entry so that a very minimum time is lost in giving immediate treatment to casualties arriving in the hospital. There should be an easy ambulance approach with adequate space for free passage of vehicles and covered area for alighting patients.

## Therapeutic Services

### Operation Theatre

Operation theatre usually have a team of surgeons anesthetists, nurses and sometime pathologist and radiologist operate upon or care for the patients. The location of Operation theatre should be in a quite environment, free from noise and other disturbances, free from contamination and



possible cross infection, maximum protection from solar radiation and convenient relationship with surgical ward, intensive care unit, radiology, pathology, blood bank and CSSD. This unit also need constant specialized services, such as, piped suction and medical gases, electric supply, heating, air-conditioning, ventilation and efficient life service, if the theatres are located on upper floors. Zoning should be done to keep the theatres free from micro organisms. There may be four well defined zones of varying degree of cleanliness namely, Protective Zone, Clean Zone, Aseptic or Sterile Zone and Disposal or Dirty Zone. Normally there are three types of traffic flow, namely, patients, staff and supplies. All these should be properly channelized. An Operation Theatre should also have Preparation Room, Pre-operative Room and Post Operative Resting Room. Operating room should be made dust-proof and moisture proof. There should also be a Scrub-up room where operating team washes and scrub-up their hands and arms, put on their sterile gown, gloves and other covers before entering the operation theatre. The theatre should have sink / photo sensors for water facility. Laminar flow of air be maintained in operation theatre. It should have a central air conditioning facility. It should have a single leaf door with self closing device and viewing window to communicate with the operation theatre. A pair of surgeon's sinks and elbow or knee operated taps are essential. Operation Theatre should also have a Sub-Sterilizing unit attached to the operation theatre limiting its role to operating instruments on an emergency basis only.

Theatre refuse, such as, dirty linen, used instruments and other disposable / non disposable items should be removed to a room after each operation. Non-disposable instruments after initial wash are given back to instrument sterilization and rest of the disposable items are disposed off and destroyed. Dirty linen is sent to laundry through a separate exit. The room should be provided with sink, slop sink, work bench and draining boards.

## Delivery Suite Unit

The Delivery Suite Unit be located near to operation theatre.

The Delivery Suite Unit should include the facilities of accommodation for various facilities as given below:

- Reception and admission
- Examination and Preparation Room
- Labour Room (clean and a septic room)
- Delivery Room
- Neo-natal Room
- Sterilizing Rooms
- Sterile Store Room
- Scrubbing Room
- Dirty Utility

## Physiotherapy

The physiotherapy department provides treatment facilities to patients suffering from crippling diseases and disabilities. The department is more frequently visited by out-patients but should be located at a place which may be at convenient access to both outdoor and indoor patients with privacy. It should also have a physical and electro-therapy rooms, gymnasium, office, store and toilets separate for male and female. Normative standards will be followed.

## Hospital Services

### Hospital Kitchen (Dietary Service)

The dietary service of a hospital is an important therapeutic tool. It should easily be accessible from outside along with vehicular



accessibility and separate room for dietician and special diet. It should be located such that the noise and cooking odours emanating from the department do not cause any inconvenience to the other departments. At the same time location should involve the shortest possible time in delivering food to the wards.

### **Central Sterile and Supply Department (CSSD)**

As the operation theatre department is the major consumer of this service, it is recommended to locate the department at a position of easy access to operation theatre department. It should have a provision of hot water supply.

### **Hospital Laundry**

It should be provided with necessary facilities for drying, pressing and storage of soiled and cleaned linens.

### **Medical and General Stores**

There are of medical and general store should have vehicular accessibility and ventilation, security and fire fighting arrangements.

### **Mortuary**

It provides facilities for keeping of dead bodies and conducting autopsy. It should be so located that the dead bodies can be transported unnoticed by the general public and patients.

### **Engineering Services**

#### **Electric Engineering**

##### **Sub Station and Generation**

Electric sub station and standby generator room should be provided.

### **Illumination**

The illumination and lightning in the hospital should be done as per the prescribed standards.

### **Emergency Lighting**

Shadow less light in operation theatre and delivery rooms should be provided. Emergency portable light units should be provided in the wards and departments.

### **Call Bells**

Call bells with switches for all beds should be provided in all types of wards with indicator lights and location indicator situated in the nurses duty room of the wards.

### **Ventilation**

The ventilation in the hospital may be achieved by either natural supply or by mechanical exhaust of air.

### **Mechanical Engineering**

Air-conditioning and Room Heating in operation theatre and neo-natal units should be provided. Air coolers or hot air convectors may be provided for the comfort of patients and staff depending on the local needs.

Hospital should be provided with water coolers and refrigerator in wards and departments depending upon the local needs.

### **Public Health Engineering**

#### **Water Supply**

Arrangement should be made for round the clock piped water supply along with an overhead



water storage tank with pumping and boosting arrangements. Approximately 10000 litres of potable water per day is required for a 100 bedded hospital. Separate provision for fire fighting and water softening plants be made available.

### **Drainage and Sanitation**

The construction and maintenance of drainage and sanitation system for waste water, surface water, sub-soil water and sewerage shall be in accordance with the prescribed standards. Prescribed standards and local guidelines shall be followed.

### **Waste Disposal System**

National guidelines on Bio-Medical Waste Management and a Notification of Environment and Forests are at Annexure - I

### **Trauma Centre**

Guidelines to be followed

### **Fire Protection**

**Telephone and Intercom**

**Medical Gas**

**Cooking Gas:** Liquefied petroleum gas (LPG)

**Laboratory Gas:** Liquefied petroleum gas (LPG) and other specified gases.

**Building Maintenance:** Provision for building maintenance staff and an office-cum store will be provided to handle day to day maintenance work.

**Parking:** Sufficient parking place as per the norms will be provided.

**Administrative Services:** Two sections (i) General section to deal with overall upkeep of the hospital and welfare of its staff and patients (ii) Medical Records section.

**Committee Room:** A meeting or a committee room for conferences, trainings with associated furniture.

### **Residential Quarters**

All the essential medical and para-medical staff will be provided with residential accommodation.



## 8. MANPOWER

### 8.1. Man Power – Doctors

S. No	Staff	51-100 bedded Sub-District Hospital
1	Hospital Superintendent	1
2	Medical Specialist	2
3	Surgery Specialists	2
4	O&G specialist	2
5	Dermatologist/ Venereologist	1
6	Paediatrician	2
7	Anesthetist (Regular / trained)	2
8	ENT Surgeon	1
9	Ophthalmologist	1
10	Orthopedician	1
11	Radiologist	2
12	Casualty Doctors / General Duty Doctors	9 (at least 4 female doctors from allopathy)
13	Dental Surgeon	1
14	Public Health Manager <sup>1</sup>	1
15	Forensic Expert	1
16	AYUSH Physician <sup>2</sup>	2
17	Pathologist with DCP / MD (Micro) / MD (Patho) / MD (Biochemistry)	1
	<b>Total</b>	<b>32</b>

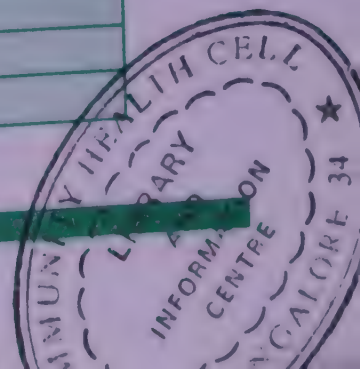
<sup>1</sup> May be a Public Health Specialist or management specialist trained in public health

<sup>2</sup> Provided there is no AYUSH hospital / dispensary in the district headquarter

### 8.2. Man Power – Para Medical

S. No	Staff	51-100 bedded Sub-District Hospital
1	Staff Nurse	50 (including 5 ward incharge)
2	Attendant	1
3	Ophthalmic Assistant / Refractionist	1
4	ECG Technician	1
5	Audiometry Technician	1
6	Laboratory Technician ( Lab + Blood storage)	5
7	Laboratory Attendant (Hospital Worker)	3
8	Radiographer	3
9	Pharmacist*	5
10	Matron (including assistant matron)	2
11	Physiotherapist	1
12	Statistical Assistant	1
13	Medical Records Officer / Technician	1
14	Electrician	1
15	Plumber	1
	<b>Total</b>	<b>77</b>

\* One may from AYUSH.



PH-100  
2002 D07-



**8.3. Manpower- Administrative Staff**

S. No.	Staff	51-100 bedded Sub-District Hospital
1	Junior Administrative Officer	1
2	Accountant	2
3	Computer Operator	6
4	Driver	2
5	Peon	2
6	Security Staff*	2
	<b>Total</b>	<b>15</b>

**Note :** Drivers post will be in the ratio of 1 Driver per 1 vehicle. Driver will not be required if outsourced

\* The number would vary as per requirement and to be outsourced.

**8.4. Man Power – Operation Theatre**

S. No	Staff	51-100 bedded Sub-District Hospital	
		Emergency / FW OT	General OT
1	Staff Nurse	4	1
2	OT Assistant	4	2
3	Safai Karamchari	2	1
	<b>Total</b>	<b>10</b>	<b>4</b>

**8.5. Man Power – Blood Storage**

S. No.	Staff	Blood Storage
1	Staff Nurse	1
2	MNA / FNA	1
3	Blood Bank/Storage Technician	5
4	Safai Karamchari	3
5	Attendant	2



## 9. EQUIPMENT

### I. Imaging Equipment

S. No.	Name of the Equipment	51-100 bedded Sub-District Hospital
1	500 M.A. X-ray machine*	
2	300 M.A. X-ray machine	1
3	100 M.A. X-ray machine	1
4	60 M.A. X-ray machine (Mobile)	1
5	C arm with accessories *	
6	Dental X-ray machine	1
7	Ultra Sonogram (Obs & Gyne. department should be having a separate ultra-sound machine of its own)	1 + 1
8	C.T. Scan*	
9	Mammography Unit *	
10	Echocardiogram*	

\* - These items will be provided depending upon the need and availability of skilled personnel

### II. X-Ray Room Accessories

S. No.	Name of the Equipment	51-100 bedded Sub-District Hospital
1	X-ray developing tank	1
2	Safe light X-ray dark room	2
3	Cassettes X-ray	10
4	X-ray lobby single	4
5	X-ray lobby Multiple	
6	Lead Apron	1
7	Intensifying screen X-ray	1



### III. Cardiac Equipments

S. No.	Name of the Equipment	51 -100 bedded Sub-District Hospital
1	ECG machine computerized	
2	ECG machine ordinary	1
3	12 Channel stress ECG test equipments Tread Mill *	
4	Cardiac Monitor	2
5	Cardiac Monitor with defibrillator	2
6	Ventilators (Adult)	
7	Ventilators (Paediatrics)	
8	Pulse Oximeter	2
9	Pulse Oximeter with NIB.P*	
10	Infusion pump	1
11	B.P.apparatus table model	8
12	B.P.apparatus stand model	5
13	Stethoscope	5

\* To be provided as per need.

### IV. Labour ward & Neo Natal Equipments

S. No.	Name of the Equipment	51-100 bedded Sub-District Hospital
1	Baby Incubators	1
2	Phototherapy Unit	1
3	Emergency Resuscitation Kit-Baby*	2
4	Radiant Warmer	1
5	Room Warmer	2
6	Foetal Doppler	1
7	CTG Monitor	1
8	Delivery Kit	2
9	Episiotomy kit	2
10	Forceps Delivery Kit	1
11	Crainotomy	1
12	Vacuum extractor metal	1
13	Silastic vacuum extractor	1
14	Pulse Oximeter baby & adult	1
15	Cardiac monitor baby	1
16	Nebulizer baby	1
17	Weighing machine adult	2
18	Weighing machine infant	2



### V. Ear Nose Throat Equipments

S. No.	Name of the Equipment	51-100 bedded Sub-District Hospital
1	Audiometer	1
2	Operating Microscope (ENT)*	1
3	Head light (ordinary) (Boyle Davis)	1
4	ENT Operation set including headlight, Tonsils	1
5	Mastoid Set	1
6	Micro Ear Set myringoplasty*	
7	Stapedotomy Set*	
8	Stapedoplasty*	
9	ENT Nasal Set (SMR, Septoplasty, Polypetcomy, DNS, Rhinoplasty)*	
10	Laryngoscope fibreoptic ENT *	
11	Laryngoscope indirect	1
12	Otoscope	1
13	Oesophagoscope Adult*	
14	Oesophagoscope Child *	
15	Head Light (cold light)	1
16	Tracheostomy Set	1
17	Tuning fork	1

\* To be provided as per need.

### VI. Eye Equipments

Sl. No.	Name of the Equipment	51-100 bedded Sub-District Hospital
1	Cryo Surgery Unit*	
2	Opthalmoscope - Direct	1
3	Slit Lamp	1
4	Retino scope*	
5	Perimeter	1
6	IOL Operation set	2
7	Laser Photocoagulometer*	

\* - to be supplied by Blindness Control Society



**VII. Dental Equipments**

S. No.	Name of the Equipment	51-100 bedded Sub-District Hospital
1	Air Rotor	1
2	Dental Unit with motor for dental OP	1
3	Dental Chair	1
4	Dental Lab	
5	Dental Kit	1

**VIII. Operation Theatre Equipment**

S. No.	Name of the Equipment	51-100 bedded Sub-District Hospital
1	Auto Clave HP Horizontal	
2	Auto Clave HP Vertical (2 bin)	2
3	Operation Table Ordinary Paediatric*	
4	Operation Table Hydraulic Major	1
5	Operation table Hydraulic Minor	2
6	Operating table non-hydraulic field type	1
7	Operating table Orthopedic *	
8	Autoclave with Burners 2 bin*	
9	Autoclave vertical single bin	1
10	Shadowless lamp ceiling type major*	1
11	Shadowless lamp ceiling type minor*	1
12	Shadowless Lamp stand model	1
13	Focus lamp Ordinary	2
14	Sterilizer big (Instrument)	2
15	Sterilizer Medium (Instrument)	3
16	Steriliser Small (Instruments)	3
17	Bowl Steriliser - big*	1
18	Bowl steriliser - Medium*	1
19	Diathermy Machine (Electric Cautery)	
20	Suction Apparatus - Electrical	3
21	Suction Apparatus - Foot operated	2
22	Dehumidifier*	
23	Ultra violet lamp philips model 4 feet	2
24	Ethylene Oxide sterilizer*	
25	Microwave sterilizer*	

\* To be provided as per need.



## IX. Laboratory Equipments

S. No.	Name of the Equipment	51-100 bedded Sub-District Hospital
1	Binocular Microscope	4
2	Balance (Electrical Monopan)	1
3	Simple balance	1
4	Electric Colorimeter	1
6	Semi auto analyser	1
7	Micro pipettes of different volume range	4
8	Water bath	1
9	Hot Air oven*	1
10	Lab Incubator*	1
11	Distilled water plant	2
12	Electricentrifuge Table Top	2
13	Cell Counter Electronic*	1
14	Hot plates	2
15	Rotor / Shaker	1
16	Counting chamber	2
17	PH meter	1
18	Paediatric Glucometer / Bilirubinometer*	
19	Glucometer	1
20	Haemoglobinometer	1
22	TCDC count apparatus	1
23	ESR stand with tubes	3
24	Test tube stands *	5
25	Test tube rack *	5
26	Test tube holders*	5
27	Spirit lamp*	6
34	Timer stop watch	2
35	Alarm clock	1
36	Lab Autoclaves	2
37	Refrigerators	2
38	Bio-safety Cabinet (Class-I)	1

\* To be provided as per need.



**X. Surgical Equipment Sets**

<b>S. No.</b>	<b>Name of the Equipment</b>	<b>51-100 bedded Sub-District Hospital</b>
1	P. S. Set	1
2	MTP Set	1
3	Biopsy Cervical Set*	1
4	D & C Set	1
5	I.U.C.D. Kit	1
6	LSCS set	1
7	MVA Kit	2
8	Vaginal Hysterectomy	1
9	Proctoscopy Set*	1
10	P.V. Tray*	1
11	Abdominal Hysterectomy set	1
12	Laparotomy Set	1
13	Formaline dispenser	2
14	Kick Bucket	6
15	General Surgical Instrument Set Piles, Fistula, Fissure*	1
16	Knee hammer	2
17	Hernia, Hydrocele*	1
18	Varicose vein etc*	1
19	Gynaec Electric Cautery	
20	Vaginal Examination set*	4
21	Suturing Set*	3
22	MTP suction apparatus	1
23	Thoracotomy set	
24	Neuro Surgery Craniotomy Set	
25	I M Nailing Kit	
26	SP Nailing	1
27	Compression Plating Kit*	
28	AM Prosthesis*	
29	Dislocation Hip Screw Fixation*	
30	Fixation Fracture Hip	
31	Spinal Column Back Operation Set	
32	Thomas Splint	5



33	Paediatric Surgery Set	
34	Mini Surgery Set*	1
35	Urology Kit	
36	Surgical Package for Cholecystectomy*	
37	Surgical package for Thyroid	
38	GI Operation Set*	2
39	Appendicectomy set *	2
40	L.P.Tray*	3
41	Urethral Dilator Set	2
42	TURP resectoscope *	
43	Haemodialysis Machine *	
44	Amputation set	1
45	Universal Bone Drill	
46	Crammer wire splints	8
47	Heamo dialysis machine	

\* To be provided as per need.

### XI. Physiotherapy Equipments

S. No.	Name of the Equipment	51-100 bedded Sub-District Hospital
1	Skeleton traction set	1
2	Interferential therapy unit	1
3	Short Wave Diathermy	1

### XII. Endoscopy Equipments

S. No.	Name of the Equipment	51-100 bedded Sub-District Hospital
1	Endoscope fibre Optic (OGD) *	
2	Arthroscope	
3	Laparoscope operating major with accessories *	
4	Laparoscope diagnostic and for sterilisation *	1
5	Colonoscope and sigmoidoscope*	
6	Hysteroscope *	1
7	Colposcope *	1

\* - to be provided as per need



**XIII. Anaesthesia Equipments**

Sl. No.	Name of the Equipment	51-100 bedded Sub-District Hospital
1	Anaesthetic - laryngoscope magills with four blades	2
2	Endo tracheal tubes sets	1
3	Magills forceps (two sizes)	5
4	Connector set of six for E.T.T	5
5	Tubes connecting for ETT	4
6	Air way female*	4
7	Air way male*	10
8	Mouth prop*	6
9	Tongue depressors*	8
11	O2 cylinder for Boyles	8
12	N2O Cylinder for Boyles	8
13	CO2 cylinder for laparoscope*	
14	PFT machine	1
15	Boyles Apparatus with Fluotec and circle absorber	1
16	Exchange Transfusion Sets*	

\* - to be provided as per need

**XIV. Furniture & Hospital Accessories**

S. No.	Name of the Equipment	51-100 bedded Sub-District Hospital
1	Doctor's chair for OP Ward, Blood Bank, Lab etc.	20
2	Doctor's Table	6
3	Duty Table for Nurses	5
4	Table for Sterilisation use (medium)	6
5	Long Benches(6 1/2' x 1 1/2')	20
6	Stool Wooden	15
7	Stools Revolving	8
8	Steel Cup-board	15
9	Wooden Cup Board	6
10	Racks -Steel – Wooden	7
11	Patients Waiting Chairs (Moulded) *	10
12	Attendants Cots *	4
13	Office Chairs	4
14	Office Table	4



15	Foot Stools *	12
16	Filing Cabinets (for records) *	6
17	M.R.D.Requirements (record room use) *	1
18	Paediatric cots with railings	5
19	Cradle*	3
20	Fowler's cot	0
21	Ortho Fracture Table*	0
22	Hospital Cots (ISI Model )	100
23	Hospital Cots Paediatric (ISI Model )	10
24	Wooden Blocks (Set)*	2
25	Back rest*	4
26	Dressing Trolley (SS)	4
27	Medicine Almairah	2
28	Bin racks (wooden or steel)*	5
29	ICCU Cots	4
30	Bed Side Screen (SS-Godrej Model)	4
31	Medicine Trolley(SS)	4
32	Case Sheet Holders with clip(S.S.)*	60
33	Bed Side Lockers (SS)*	0
34	Examination Couch (SS)	2
35	Instrument Trolley (SS)	6
36	Instrument Trolley Mayos (SS)	4
37	Surgical Bin Assorted	25
38	Wheel Chair (SS)	4
39	Stretcher / Patient Trolley (SS)	3 each
40	Instrument Tray (SS) Assorted	30
41	Kidney Tray (SS) - Assorted	30
42	Basin Assorted (SS)	30
43	Basin Stand Assorted (SS)	
	(2 basin type )	4
	( 1 basin type)	8
44	Delivery Table (SS Full)	6
45	Blood Donor Table*	1
46	O2 Cylinder Trolley(SS)	8
47	Saline Stand (SS)	15
48	Waste Bucket (SS)*	25
49	Dispensing Table Wooden	1
50	Bed Pan (SS)*	20



51	Urinal Male and Female	20
52	Name Board for cubicals*	1
53	Kitchen Utensils*	
54	Containers for kitchen*	
55	Plate, Tumblers*	
56	Waste Disposal - Bin / drums	8
57	Waste Disposal - Trolley (SS)	1
58	Linen Almirah	3
59	Stores Almirah	3
60	Arm Board Adult*	10
61	Arm Board Child*	10
62	SS Bucket with Lid	6
63	Bucket Plastic*	8
64	Ambu bags	5
65	O2 Cylinder with spanner ward type	12
66	Diet trolley - stainless steel	1
67	Needle cutter and melter	15
68	Thermometer clinical *	20
69	Thermometer Rectal*	3
70	Torch light*	10
71	Cheatles forceps assorted*	8
72	Stomach wash equipment*	2
73	infra Red lamp*	3
74	Wax bath*	1
75	Emergency Resuscitation Kit-Adult*	2
76	Enema Set*	6
77	Ceiling Fan\$	As per requirement
78	Bed Side Screen (SS-Godrej Model)^	As per requirement

\* - to be provided as per need

\$ - One fan per four beds in the ward.

^ - At least one screen per five beds except female wards.



**XV. PM equipments**

<b>S. No.</b>	<b>Name of the Equipment</b>	<b>51-100 bedded Sub-District Hospital</b>
1	Mortuary table (Stainless steel) *	2
2	P.M.equipments (list)	3
3	Weighing machines (Organs)	1
4	Measuring glasses(liquids)	2
5	Aprons*	10
6	PM gloves ( Pairs )*	10
7	Rubber sheets*	
8	Lens	1
9	Spot lights	2

\* - to be provided as per need

**XVI. Linen**

<b>S. No.</b>	<b>Name of the Equipment</b>	<b>51-100 bedded Sub-District Hospital</b>
1	Bed sheets	400
2	Bedspreads	600
3	Blankets Red and blue	30
4	Patna towels	150
5	Table cloth	50
6	Draw sheet	75
7	Doctor's overcoat	30
8	Hospital worker OT coat	200
9	Patients house coat (for female)	300
10	Patients Pyjama (for male) Shirt	200
11	Over shoes pairs	60
12	Pillows	150
13	Pillows covers	300
14	Mattress (foam) Adult	100
15	Paediatric Mattress	16
16	Abdominal sheets for OT	50
17	Pereneal sheets for OT	50
18	Leggings	80
19	Curtain cloth windows and doors	
20	Uniform / Apron	
21	Mortuary sheet	30
22	Mats (Nylon)	50
23	Mackin tosh sheet (in meters)	150
24	Apron for cook	



**XVII. Teaching Equipments**

S. No.	Name of the Equipment	51-100 bedded Sub-District Hospital
1	Slide Projector	1
2	O.H.P	1
3	Screen	1
4	White / colour boards	1
5	Television colour	1
6	Tape Recorder* ( 2 in 1 )	1
7	VCD Player	1
8	Radio	1
9	LCD Projectors	

\* - to be provided as per need

**XVIII. Administration**

S. No.	Name of the Equipment	51-100 bedded Sub-District Hospital
1	Computer with Modem with UPS, Printer with Internet Connection	1
2	Xerox Machine	
3	Typewriter (Electronic )*	1
4	Intercom (15 lines)*	1
5	Intercom (40 lines)*	
6	Fax Machine	1
7	Telephone	1
8	Paging System*	
9	Public Address System*	.1
10	Library facility*	

\* - to be provided as per need

**XIX. Refrigeration & AC**

S. No.	Name of the Equipment	51-100 bedded Sub-District Hospital
1	Refrigerator 165 litres	3
2	Blood Bank Refrigerator	1
3	ILR	1
4	Deep Freezer	1
5	Coolers*	As per requirement
6	Air conditioners	4
7	Central A/C for OT	

\* One cooler per 8 beds in the wards.



**XX. Hospital Plants**

S. No.	Name of the Equipment	51-100 bedded Sub-District Hospital
1	Generator 40 / 50 KV	
2	Generator 75 KV	1
3	Generator 125 KV	
4	Portable 2.5 KV	1
5	Solar Water heater *	
6	Incinerator*	
7	Central supply of O <sub>2</sub> , N <sub>2</sub> O, Vacuum *	
8	Cold storage for mortuary *	

\* - to be provided as per need

**XXI. Hospital Fittings & Necessities**

S. No.	Name of the Equipment	51-100 bedded Sub-District Hospital
1	Ceiling Fans*	30
2	Exhaust Fan*	8
3	Pedestal Fan*	1
4	Wall Fan*	2
5	Hotwater geiser*	1
6	Fire extinguishers*	
7	Sewing Machine*	1
8	Lawn Mover*	2
9	Vaccum cleaner*	1
10	Aqua guard*	
11	Solar water heater *	
12	Neon sign for hospital*	
13	Garden equipment*	
14	Borewell motor OHT *	
15	Water dispenser / Water cooler*	
16	Laundry (steam) *	
17	Emergency lamp	
18	Emergency trauma set*	1
19	Tube lights*	50
20	Drinking Water Fountain*	2

\* - to be provided as per need



## XXII. Transport

S. No.	Name of the Equipment	51-100 bedded Sub-District Hospital
1	Ambulance	2
2	Van (Family Welfare)	
3	Pickup vehicles Maruti (Omni)	
4	Mortuary Van	1
5	Administrative vehicle (Car)	
6	Minidor 3 wheeler	
7	Bicycle	
8	Camp Bus	
9	Progamme vehicle	
10	Motorcycle	



10. **Laboratory Services:** Following services will be ensured, for advanced diagnostic tests, a list of National Reference Laboratories has been provided as annexure:

S. No.	Speciality	Diagnostic Services / Tests
I.	<b>Clinical Pathology</b>	
	a. Haematology	Haemoglobin estimation
		Total Leucocyte count
		Differential Leucocyte count
		Absolute Eosinophil count
		Reticulocyte count
		Total RBC count
		E.S.R.
		Bleeding time
		Clotting time
		Prothrombin time
		Peripheral Blood Smear
		Malaria/Filaria Parasite
		Platelet count
		Packed Cell volume
		Blood grouping
		Rh typing
		Blood Cross matching
	b. Urine Analysis	Urine for Albumin, Sugar, Deposits, bile salts, bile pigments, acetone, specific gravity, Reaction (pH)
	c. Stool Analysis	Stool for Ovacyst (Eh)
		Hanging drop for V.Cholera
		Occult blood
	d. Semen Analysis	Morphology, count
	e. CSF Analysis	Analysis, Cell count etc
	f. Aspirated fluids	Cell count cytology
II.	<b>Pathology</b>	
	a. Sputum	Sputum cytology



S. No.	Speciality	Diagnostic Services / Tests
III.	Microbiology	Smear for AFB (Acid Fast Bacilli), KLB (Diphtheria Bacilli)
		Grams Stain for Meningococci
		KOH study for fungus
		Grams Stain for Throat swab, sputum etc.
IV.	Serology	RPR Card Test for Syphilis
		Pregnancy test (Urine gravindex)
		WIDAL test
		Rapid test for HIV, HBs Ag, HCV Stocking of rapid H <sub>2</sub> S based test for bacteriological examination of water

S. No.	Speciality	Diagnostic Services / Tests
V.	Biochemistry	Blood Sugar
		Blood urea, blood cholesterol
		Liver function tests
		Kidney function tests
		Stocking of OT test for residual chlorine in water.
		CSF for protein, sugar
		Iodometry Titration

S. No.	Speciality	Diagnostic Services / Tests
VI.	Cardiac Investigations	ECG
VII.	Ophthalmology	Refraction by using Snellen's chart
		Retinoscopy
		Tonometry
		Biometry
		Ophthalmoscopy
VIII.	ENT	Audiometry
IX.	Radiology	X-ray for Chest, Skull, Spine, Abdomen, bones
		Dental X-ray
		Ultrasonography with colour doppler



S. No.	Speciality	Diagnostic Services / Tests
X	Endoscopy	
		Laparoscopy (Diagnostic)
XI.	Physiology	Pulmonary function tests

## 11. Recommended Allocation of Bed Strength at Various Levels

Sl. No	Item	Type	Sub District Hospital 51-100 bedded
1	General Medicine	Beds (M+F)	8+8
2	New born ward	Beds	3
3	Mothers room with dining and toilets	Beds	5
4	Paediatrics ward	Beds	6
5	Critical care ward – IMCU	Beds	5
6	Isolation Ward	Beds	4
7	Dialysis unit (as per specifications)	Beds	
8	Thoracic medicine ward with room for pulmonary function test	Beds (M+F)	
9	Blood bank		Yes
10	General surgery ward (incl. Urology, ENT)	Beds (M+F)	8+8
11	Post – Operative Ward	Beds (M+F)	10*+8
12	Accident and Trauma ward	Beds	
13	Labour room	Boards	3
14	Labour room (Eclampsia)	Beds	
15	Septic Labour room	Boards	
16	Ante-natal ward	Beds	6
17	Post-natal ward	Beds	6
18	Postpartum ward	Beds	10
19	Post operative ward	Beds	
20	Ophthalmology ward	Beds	
21	Burns Ward	Beds	-

### REQUIREMENTS FOR OPERATION THEATRE

S. No	Item	Sub District Hospital 51-100 bedded
1	Elective OT-Major	1
2	AE OT*	
3	Emergency OT/FW OT	1
4	Ophthalmology /ENT OT*	

\* To be provided as per need.

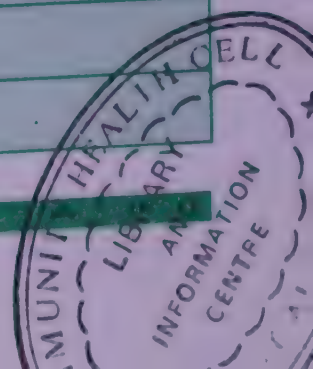


## 12. List of Medicines / Instruments / Equipments /Lab Reagents / Other Consumables and Disposables for District Hospitals

S. No.	Name of the item
<b>A)</b>	<b>Analgesics/Antipyretics/Anti Inflammatory</b>
1	Tab.Aspirin 300mg
2	Tab.Paracetamol 500mg
3	Inj.Diclofenac sodium
4	Tab.Diclofenac sod
5	Tab.Dolonex DT 20mg
6	Tab.Ibuprofen
<b>B)</b>	<b>Chemotherapeutics</b>
7	Inj.Crystalline penicillin 5 lac unit
8	Inj.Fortified procaine pen 4 lac
9	Inj.Ampicillin 500mg
10	Inj.Gentamycin 40mg/2ml vial
11	Inj.crystalline penicillin 10 lac unit
12	Cap.Ampicillin 250mg
13	Cap.Tetracycline 250mg
14	Tab.Trimethoprim+Sulphamethazol ss
15	Tab.Ciprofloxacin 250mg
16	Tab.Ciprofloxacin 500mg
17	Inj.Ciprofloxacin 100ml
18	Tab.Erythromycin 250mg
19	Tab.Erythromycin 500mg
20	Syrup Cotrimoxazole 50ml
21	Syrup Ampicillin 125mg/5ml 60ml
22	Inj.Cefoperazone 1Gm
23	Inj.cefotaxime 500mg
24	Tab.Norfloxacin 200mg



25	Tab.Norfloxacin 400mg
26	Tab.Ofloxacin 200mg
27	Inj.Vionocef(Ceffixime)250mg
28	Inj.Amikacin sulphate 500mg
29	Inj.Amikacin sulphate 100mg
30	Cap.Cefodroxyl 250mg
31	Inj.Amoxyccillin 500mg
<b>C)</b>	<b>Anti Diarrhoeal</b>
32	Tab.Metronidazole 200mg
33	Tab.Metronidazole 400mg
34	Syrup.Metronidazole
35	Tab.Furazolidone 100mg
36	Tab.Diolaxanide Fuzate
37	Tab.Tinidazole 300mg
<b>D)</b>	<b>Dressing Material/Antiseptic lotion</b>
38	Povidone Iodine solution 500ml
39	Phenyl 5litr jar(Black Phenyl)
40	Benzalkonium chloride 500ml bottle
41	Rolled Bandage a) 6cm
	b) 10cm
	c) 15cm
42	Bandage cloth(100cmx20mm) in Than
43	Surgical Guaze(50cmx18m) in Than
44	Adhesive plaster 7.5cm x 5mtr
45	Absorbent cotton I.P 500gm Net
46	P.O.P Bandage a) 10cm
	b) 15cm
47	Framycetin skin oint 100 G tube
48	Silver Sulphadiazene Oint 500gm jar





49	Antiseptic lotion containing :
	a) Dichlorometxylenol 100ml bot
	b) Haffkinol 5litre jar
50	Sterilium lotion
51	Bacillocid lotion
<b>E)</b>	<b>Infusion fluids</b>
52	Inj.dextrose 5% 500ml
53	Inj.Dextrose 10% 500ml bottle
54	Inj.Dextrose in Normal saline 500ml bt
55	Inj.Normal saline (Sod chloride) 500ml
56	Inj.Ringer lactate 500ml
57	Inj.Mannitol 20% 300ml
58	Inj.Water for 5ml amp
59	Inj.Water for 10ml amp
60	Inj.Dextrose 25%100ml bot
61	I.V.Metronidazole 100ml
62	Inj.Plasma Substitute 500ml bot
63	Inj.Lomodex
<b>F)</b>	<b>Other Drugs &amp; Material</b>
64	All Glass Syringes 2ml
	5ml
	10ml
	20ml
65	Hypodermic Needle (Pkt of 10 needle)
	a) No.19
	b) No.20
	c) No.21
	d) No.22
	e) No.23



	f) No.24
	g) No.25
	h) No.26
66	Scalp vein sets no a)19
	b) 20
	c) 21
	d) 22
	e) 23
	f) 24
	g) 25
	h) 26
	b) 20
67	Gelco all numbers
68	Tab.B.Complex NFI Therapeutic
69	Tab.Polyvitamin NFI Therapeutic
70	Inj.Dexamethasone 2mg/ml vial
71	Inj.Vitamin B Complex 10ml
72	Inj.B12 Folic acid
73	Surgical Gloves a)6 "
	b)6.1/2"
	c)7"
	d)7.5"
74	Catgut Chromic a)1 No.
	b)2 No.
	c)1-0 No
	d)2-0 N0
	e)8-0
75	Vicryl No.1
76	Sutupak 1,1/0,2,2/0



77	Prolene
78	X Ray film 50 film packet(in Pkt) size
	a)6.1/2x8.1/2"
	b)8"x10"
	c)10"x12"
	d)12"x15"
79	Fixer
80	Developer
81	CT Scan film
82	Ultrasound scan film
83	Dental film
84	Oral Rehydration powder 27.5g
85	Ether Anaesthetic 500ml
86	Halothane
<b>G)</b>	<b>Eye Drops</b>
87	Sulphacetamide eye drops 10% 5ml
88	Framycetin with steroid eye drops 5ml
89	Framycetin eye drops 5ml
90	Ciprofloxacin eye drops
91	Gentamycin eye drops
<b>H)</b>	<b>Other Material</b>
92	Rubber Mackintosh Sheet in mtr
93	Sterile Infusion sets(Plastic)
94	Antisera I) A 5ml
	II) B 5ml
	III) D 5ml
	IV) AB 5ml
95	Inj.MethylErgometrine 0.2mg/amp
96	Inj.Streptokinase 7.5lac vial



97	Inj.Streptokinase 15lac vial
98	Inj.PAM
99	Tab.Antacid
100	ARS
101	Syp.Antacid
102	Inj.Rabipur
103	Inj.Ranitidine 2ML
104	Tab.Ranitidine
105	Tab.Omeprazole
106	Cough syrup 5litre Jar
107	Cough syrup with Noscapine 100ml
108	Coir Mattress
109	Inj.Lignocaine 1%
110	Inj.lignocaine 2%
111	Inj.Lignocaine 5%
112	Inj.Marcaine
113	Inj.Diazepam
114	Inj.Salbactum+Cefoperazone2Gm
115	Inj.Amoxycillin with clavutanite acid 600mg
116	Cap.Amoxycillin250+cloxacillin 250
117	Inj.Cefuroxime 250/750
118	Tab.Pefloxacin 400mg
119	Tab.Gattifloxacin 400mg
120	Tab.Valdecoxib 20mg
121	Tab.Atrovastatin 10mg
122	Sy.Himalt-X
123	Sy.Protein(Provita)
<b>I)</b>	<b>Antibiotics and Chemotherapeutics</b>
1	Tab.Chloroquine phosphate 250mg



2	Inj.Chloroquine phosphate
3	Inj.Quinine
4	Tab.Erythromycine Esteararte 250mg
5	Syp.Erythromycine
6	Tab.Phenoxymethyl Penicillin125mg
7	Cap.Rifampicin
8	Tab.Isoniazid 100mg
9	Tab.Ethambutol 400mg
10	Tab.Isoniazid
11	Cap.Neomycin
12	Inj.Benzathine penicillin 12la
<b>J)</b>	<b>Antihistaminics/anti-allergic</b>
13	Inj.Pheniramine maleate
14	Tab.Diphenhydramine (eqv.Benadryl)
15	Tab.Cetirizine
16	Tab.Chlorpheniramine maleate 4mg
17	Tab.Diethylcarbamazin
<b>K)</b>	<b>Drugs acting on Digestive system</b>
18	Tab.Cyclopam
19	Inj.Cyclopam
20	Tab.Bisacodyl
21	Tab.Perinorm
22	Inj.Perinorm
23	syrup.Furazolidone
24	Inj.Prochlorperazine(Stemetil)
25	Tab.Piperazine citrate
26	Tab.Mebendazole 100mg
27	Syp.Mebendazole
28	Sy.Piperazine Citrate



29	Sy.Pyrantel Pamoate
30	Tab.Belladona
<b>L)</b>	<b>Drugs related to Hoemopoetic system</b>
31	Tab.Ferrous sulphate200mg
32	Inj.Iron Dextran/Iron sorbitol
<b>M)</b>	<b>Eye ointment</b>
33	Chloramphenicol eye ointment & applicaps
34	Chloramphenicol + Dexamethsone ointment
35	Gentamycin eye/ear drops
36	Dexamethasone eye drops
37	Drosyn eye drops
38	Atropine eye ointment
<b>N)</b>	<b>Drugs acting on Cardiac vascular system</b>
39	Inj.adrenaline
40	Inj.atropine sulphate
41	Inj.Digoxine
42	Tab.Digoxine
43	Inj.Mephentine
44	Tab.Atenolol
45	Tab.Isoxuprine
46	Inj.Duvadilan
47	Tab.Methyldopa
48	Tab.Isosorbide Dinitrate(Sorbitrate)
49	Tab.Propranolol
50	Tab.Verapamil(Isoptin)
51	tab.Enalapril2.5/5mg
<b>O)</b>	<b>Drugs acting on Central/peripheral Nervous system</b>
52	Inj.Pentazocine (Fortwin)
53	Inj.Pavlon 2ml amp



54	Inj.Chlorpromazine 25mg(like Largactil)
55	Inj.Promethazine Hcl Phenergan
56	inj.Pethidine
57	Inj.Diazepam 5mg
58	Tab.Haloperidol
59	Inj.Haloperidol
60	Tab.Diazepam 5mg
61	Tab.Phenobarbitone 30mg
62	Tab.Phenobarbitone 60mg
63	Tab.Largactil 25mg
64	Tab.Pacitane
65	Tab.Surmontil
66	Syrup.Phenergan
67	Syrup Paracetamol
68	Ethyl chloride spray
69	Lignocaine oint
70	Gentamycin eye/ear drops
71	Betnesol-N/Efcorlin Nasal drops
<b>P)</b>	<b>Drugs acting on Respiratory system</b>
72	Inj.Aminophylline
73	Tab.Aminophylline
74	Inj.Deriphylline
75	Tab.Deriphylline
76	Tab.Salbutamol 2mg
77	Syrup Tedral
78	Syrup.Salbutamol
<b>Q)</b>	<b>Antiseptic Ointment</b>
79	Furacin skin oint
80	Framycetin skin oint



<b>R)</b>	<b>Drugs acting on UroGenital system</b>
81	Tab.Frusemide 40mg
82	Inj.KCL
83	Liquid KCL
84	Tab.Pyridicil
85	Inj.Frusemide
<b>S)</b>	<b>Drugs acting on Uterus and Female Genital Tracts</b>
86	Inj.Pitocin
87	Inj.Prostodin
88	• Tab.Duvadilan
89	Tab.Methyl Ergometrine
90	<b>Tab. Mesoprostol</b>
91	Tab.Primolut-N
92	Haymycin vaginal tab
93	<b>Inj Magnesium Sulphate</b>
94	Inj.Ethacredin lact(Emcredyl)
<b>T)</b>	<b>Hormonal Preparation</b>
95	Inj.Insulin Rapid
96	Insulin lente Besal
97	Inj.Cry Insulin
98	Inj.Mixtard
99	Inj.Testosterone plain 25mg
100	Testosterone Depot 50mg
101	Tab.Biguanide
102	Tab.Chlorpropamide 100mg
103	Tab.Prednisolone 5mg
104	Tab.Tolbutamide 500mg
105	Tab.Glibenclamide
106	Tab.Betamethasone



U)	Vitamins
107	Inj.Vit "A"
108	Inj.Cholcalciferol16lac
109	Inj.Ascorbic acid
110	Inj.Pyridoxin 50mg
111	Inj.Vit K
112	Tab.Vit "A" & "D"
113	Tab.Ascorbic acid 100mg
V)	Other drugs
114	Inj.Antirabies vaccine
115	Inj.Antisnake venom
116	Inj.AntiDiphtheria Serum
117	Inj.Cyclophosphamide
118	Inj.Sodabicarb
119	Inj.Calcium Gluconate
120	Tab.Calcium lactate
121	Tr.Iodine
122	Tr.Benzoin
123	Glcial acetic caid
124	Benedict solution
125	Caster oil
126	Liquid paraffin
127	Glycerine
128	Glycerine Suppositories
129	Turpentine oil
130	Potassium Permangnate
131	Formaldehyde
132	Dextrose Powder
133	Methylated spirit



134	Cotrimazole lotion
135	Cotrimazole cream
136	Tab.Theophylline
137	ECG Roll
138	Burnion Oint
139	Flemigel APC Ointment
140	Syp.Himobin
141	APDYL Cough &Noscopin
142	Tab. Septilin
143	Tab. Cystone
144	Tab. Gasex
145	Syp. Mentat
146	Oint. Pilex
147	Rumalaya Gel
148	Pinku Pedratic Cough Syp.
<b>(W)</b>	<b>Others</b>
1	Tab.Liv52
2	Syrup Liv52
3	Cap.Doxycycline 100mg
4	Inj.Heparin sod.1000IU
5	Tab.Dipyridamol(Like Persentine)
6	Inj.Dopamine
7	Tab.Glyceryl Trinitrate
8	Tab.Amitryptilline
9	Tab.trifluoperazine(1mg)
10	Tab.Nitrofurantine
11	Inj.Valethemide Bromide(Epidosyn)
12	Inj.Isolyte-M
13	Inj.Isolyte-P



14	Inj.Isolyte-G
15	Cap.Cephalexin 250mg
16	Tab.Taxim
17	Inj.Metaclopramide
18	Tab.Folic acid
19	Inj.Lignocaine Hcl 2%
20	Inj.Nor adrenaline
21	Betadine lotion
22	Tab.stilboesteral
23	Inj.Pyridoxine
24	Hydrogen peroxide
25	Inj.magnesium sulphate
26	Benzyl Benzoate
27	GammaBenzene Hexachloride
28	Inj.Tetglobe
29	Inj.Paracetamol
30	Pilocarpine eye drops 1%
31	Sy.Orciprenaline
32	Suturing needles (RB,Cutting)
33	Inj.Calcium pantothenate
34	Inj.Xylocaine 4% 30 ml
35	Halothane
36	Mixture Alkaline
37	Inj. Phenobarbitone 200mg
38	Inj. B12 (Cynacobalamine)
39	Neosporin, Nebasuef , Soframycin Pow
40	Magnesium Sulphate Powder
41	Furacin Cream
42	Xylocaine jelly



43	Formaldehyde Lotion
44	Cetrimide 100ml bott 3.5%, 1.5% 1
45	Bacitrium powder 10mg botts
46	Bleaching Powder 5 Kg Pkts(ISI Mark)
47	Ether Solvent
48	Sodium Hypochloride Sod. 5 ltrs/1 ltrs
49	Inj. Diphthoria antition ADS)10000I.U
50	Inj. Gas gangrene Antitoxin(AGGS)10000
51	Inj. Hydroxy Progesterone500mg/2ml
52	Inj. Methyl Prednisolon 500mg vial
53	Inj.Multivitamin I.V
54	Inj.Potassium chloride
55	Inj.Quinine Dihydrochloride
56	Tetanus Antitoxin 10000 I.U
57	Inj.Tetanus Toxoid 5ml vial
58	Inj.Theophylline Etophylline
59	Inj.Vitamin A
60	Tab.Ferrous sulphate200mg+Folic acid
61	Tab.Ferrous sulphate 300mg
62	Tab.Griseofulvin125mg
63	Tab.Phenobarbitone 30mg
64	Tab.Phenobarbitone 60mg
65	Tab.Pyridoxin 10mg
66	Tab.Thyroxine sod 0.1mg
67	Warfarin sod 5mg
68	Tab.Alprazolam 0.25mg
69	Tab.Amlodipine 5mg
70	Tab.Amlodipine 10mg
71	Tab.Nefidipine 20mg



72	Tab.Nefidipine 30mg
73	Tab.Riboflavin 10mg
74	Syp.Ferrous Gluconate 100ml bottle
75	Cream Fluconazole 15gm tube
76	Sus.Furazolidone
77	Oint.Hydrocortisone acetate
78	Syp.isoniazid 100mg/5ml 100ml bot
79	Liquid paraffin
79A	Linctus codein 500ml bot
80	Cream Miconazole 2% 15gm tube
81	Syp.Nalidixic acid
82	syp.Norfloxacin
83	Phenylepinephrine eye drops
84	Pilocarpine eye drops 2%
85	Syp.Potassium chloride 400ml bot
86	Syp.Primaquine
87	Suspension Pyrantel pamoate
88	Sus Rifampicin
89	Syp.Salbutamol 100ml bot
90	Syp.Theophylline 100ml
91	Syp.Vitamin B.Complex
92	Vit D-3 Granules
93	Ophthalmic & ear drops
94	Glycerine Mag sulphate ear drops
95	Pilocarpine eye drops 4%
96	Oint Acyclovir 3% 5gm tube
97	Benzyl Benzoate emulsion 50ml bot
98	Oint.Betamethasone
99	Cream Clotrimazole skin 1% 15gm



100	Oint Dexamethasone 1%+ Framycetin
101	oint contain clotrimazole+Genta+Flucon
102	Oint Flucanazole 10 mg
103	Cream Framyctin 1% 20gm tube/100gm
104	Lot.Gamabenzene hexachloride1% bt
105	Glycerine Suppository USP 3gm bott/10
106	Cream Nitrofurazone 0.2% jar of 500g
107	Oint Silversulpadiazene 1% 25g
108	AIDS Protective kit



### 13. Capacity Building

At the time of entry into service, induction training of at least six months duration must be made mandatory for all categories of health care workers. This must be a comprehensive training and must have components of requisite skill enhancement, management and knowledge about the drugs/equipments and services offered at all levels of health care.

Secondly, at a duration of every two years, on the job training must be provided to all categories of health care personnel to upgrade their knowledge and skills in technical and management fields.

### 14. Quality Assurance in Service Delivery

Quality of service should be maintained at all levels. Standard treatment protocols for locally common diseases and diseases covered under all national programmes should be made available at all sub district hospitals. All the efforts that are being made to improve hardware i.e. infrastructure and software i.e. human resources are necessary but not sufficient. These need to be guided by standard treatment protocols and Quality Assurance in Service Delivery

#### Quality Control

#### Internal Monitoring

Social audit through Rogi Kalyan Samities / Panchayati Raj Institutions

Medical Audit, Technical Audit, Financial Audit, Disaster Preparedness Audit, Monitoring of Accessibility and equity issues, information exchange.

#### External Monitoring

Monitoring by PRI / Rogi Kalyan Samities

Service / performance evaluation by independent agencies

District Monitoring Committees formed under NRHM shall monitor the upgradation of Hospitals to IPHS. Annual Jansamvad may also be held as a mechanism of monitoring.

#### Monitoring of laboratory

Internal Quality Assessment Scheme

External Quality Assessment Scheme

#### Record Maintenance

Computers have to be used for accurate record maintenance and with connectivity to the District Health Systems, State and National Level.

### 15. Rogi Kalyan Samities (RKS) / Hospital Management Committee (HMC)

Each sub district hospital should have a Rogi Kalyan Samiti / Hospital Management Committee with involvement of PRIs and other stakeholders as per the guidelines issued by the Government of India. These RKS should be registered bodies with an account for itself in the local bank. The RKS / HMC will have authority to raise their own resources by charging user fees and by any other means and utilized the same for the improvement of service rendered by the Sub District Hospital.

### 16. Citizen's Charter

Each Sub District hospital should display a citizen's charter for the sub district hospital indicating the services available, user fees charged, if any, and a grievance redressal system. A modal citizen's charter is given as under.



## Our motto - service with smile

### CITIZENS CHARTER

This charter seeks to provide a framework which enables our users to know:

- What services are available in this hospital;
- The quality of services they are entitled to;
- The means through which complaints regarding denial or poor quality of services will be redressed.

### Standards of Service:

- This is a District, Sub-district/divisional hospital;
- It provides medical care to all patients who come to the hospital;
- Standards are influenced by patients load and availability of resources;
- Yet we insist that all our users receive courteous and prompt attention.

### Locations:

It is located on ..... road in front of .....

This hospital has-

Doctors: ..... (including residents .....).

Nurses: ..... (including supervisory staff).

Beds: .....

Doctors wear white aprons and nurses are in uniform.

All Staff member wear identity cards.

## General Information

### Enquiry, Reception and Registration Services:

This counter is functioning round the clock.

Location guide maps have been put up at various places in this hospital.

Colour coded guidelines and directional signboards are fixed at strategic points for guidance.

Telephone enquiries can be made over telephone numbers:

....., & ....., Fax:  
.....

### Casualty & Emergency Services:

All Casualty Services are available round the clock.

- Duty Doctor is available round the clock.
- Specialist doctors are available on call from resident doctors.
- Emergency services are available for all specialities as listed in the OPD Services.
- Emergency Operations are done in-  
OT located on ..... floor of ..... building.

Maternity OT  
Orthopaedic Emergency OT  
Burns and plastic OT  
Main OT for Neurosurgery cases

Emergency Operation Theatre is functioned round the clock.

In serious cases, treatment/management gets priority over paper work like registration and medico-legal requirements. The decision rests with the treating doctor.



**OPD Services:**

Various outpatient services available in the hospital are detailed below (as available):

OPD	Place	Time of Registration	Time of OPD
General Medicine			
Paediatrics			
General Surgery			
Obstetric & Gynec.			
Eye			
ENT			
Skin			
Urology			
Cardiology			
Psychiatry			
Radiotherapy			
Neurology			
Orthopaedics			
Burns & plastics			
Dental OPD			
<b>ISM Services:</b>			
Homeopathic			
Ayurvedic			
Any other			



In OPDs specialists are available for consultation.

OPD services are available on all working days excluding Sundays and Gazetted Holidays.

On Saturdays, the hospital functions from ..... AM to ..... PM.

Medical Facilities Not Available:

Organ Transplantation

.....

.....

.....

Some specialities do not have indoor patients services:

Psychiatry

D-addiction

Dental

Nuclear Medicine

Genetic Counselling

Endochronology

Geriatrics

### Laboratory Services:

**Routine:** Laboratory Services are provided in the field of (as available):

- Bio-chemistry
- Microbiology
- Haematology
- Cytology
- Histopathology including FNAC
- Clinical Pathology

There is a Central Collection Centre for receiving and collecting various specimens for testing. The timings for receiving specimens are 9:00 AM to 11:30 AM.

**Emergency:** Emergency Laboratory Services are available 24 hours for limited tests relating to clinical pathology and bio-chemistry.

### Radio Diagnostic Services:

**Routine:** These services include:

X-Rays

Ultrasound and

CAT Scan

Routine X-Rays are done from 9:00 AM to 1:00 PM. Registration is done from 9:00 AM to 11:30 AM.

Ultrasound examination is done from 9:00 AM to 4:00 PM.

**Emergency:** Emergency X-Ray services are also available round the clock. CAT Scan services are also available round the clock.

### Indoor Patient Services:

There are total of ..... Wards providing free indoor patient care.

Emergency ward A admits emergency cases for medical problems.

Emergency ward B admits emergency cases for surgical problems.

There is a \_\_\_\_\_ bedded Intensive Care Unit for care of seriously ill patients.

A \_\_\_\_\_ bedded Intensive Coronary Care Unit takes care of heart patients requiring intensive treatment.

In the Burns Department, there are \_\_\_\_\_



bedded Intensive Care Unit to treat seriously injured burns patients.

There are \_\_\_\_\_ labour rooms for conducting deliveries round the clock.

\_\_\_\_\_ nurseries provide necessary care to the newborns – normal as well those born with disease.

All indoor patients receive treatment under the guidance and supervision during office hours i.e. 9:00 AM to 4:00 PM.

Outside office hours, treatment is given by doctor on duty and specialists are available on call.

Free diet is provided to all patients in the General Wards.

Every patient is given one attendant pass.

Visitors are allowed only between 5:00 PM to 7:00 PM.

Investigations like CAT Scan, Ultra Sound, Barium-meal, ECHO, TMT etc. are charged for as per Government approved rates.

For poor patients, these charges can be waived partially or fully on the recommendation of the H.O.D. by the Additional Medical Superintendent. In case of emergency CMO (on duty) may waive off these charges.

A Staff Nurse is on duty round the clock in the ward.

Admitted patients should contact the Staff Nurse for any medical assistance they need.

### Other Facilities:

Other facilities available include:

Cold Drinking Water

Wheel chairs and trolleys are available in the OPD and casualty.

\_\_\_\_\_ Ambulances are available to pick up patients from their places (on payment of nominal charges) and also for discharged patients.

Mortuary Van is available on payment between 9:00 AM to 4:00 PM.

Public Telephone Booths are provided at various locations.

Stand-by Electricity Generators have been provided. Chemist Shops are available outside the hospital. Canteen for patients and their attendants is available.

Lifts are available for access to higher floors.

Adequate toilet Facilities for use of patients and their attendants are available.

### Complaints & Grievances:

There will be occasions when our services will not be upto your expectations.

Please do not hesitate to register your complaints. It will only help us serve you better.

Every grievance will be duly acknowledged.

We aim to settle your genuine complaints within 10 working days of its receipt.

Suggestions/Complaint boxes are also provided at various locations in the hospital.

If we cannot, we will explain the reasons and the time we will take to resolve.

Name, designation and telephone number of the



nodal officer concerned is duly displayed at the Reception.

Dr. ....

Designation.....

Tele (O)..... (R).....  
(M).....

Meeting Hours..... to .....

### Responsibilities of the Users:

The success of this charter depends on the support we receive from our uses.

Please try to appreciate the various constraints under which the hospital is functioning.

On an average more than ——— lacs patients attend the OPD annually and more than ——— ——— lacs patients are attended annually in the casualty and emergency wards.

Please do not inconvenience other patients.

Please help us in keeping the hospital and its surroundings neat and clean.

Please use the facilities of this hospital with care. Beware of Touts.

The Hospital is a "No Smoking Zone" and smoking is a Punishable Offence.

Please refrain from demanding undue favours from the staff and officials as it encourages corruption.

Please provide useful feedback & constructed suggestions. These may be addressed to the Medical Superintendent of the Hospital.

- ◆ "No Smoking Please"
- ◆ Don't split here & there
- ◆ Use Dustbin
- ◆ Keep Hospital Clean
- ◆ Give regards to Ladies and Senior Citizens



## Guidelines for the Project providing financial support to the selected Government Hospitals for Hospital Waste Management.

The Ministry of Environment & Forests notified the “Bio-Medical Waste (Management & Handling) Rules, 1998” in July, 1998.

In accordance with the rules (Rule 4), it is the duty of every “Occupier”, i.e. a person who has the control over the institution and/or its premises, to take all steps to ensure that the waste generated is handled without any adverse effect to human health and environment. The Rules further state that every Occupier, where required, shall set up requisite bio-medical waste treatment facilities like incinerator, autoclave, microwave system for the treatment of waste, or ensure requisite treatment of waste at a common treatment facility or any other treatment facility. No untreated bio-medical waste shall be kept stored beyond a period of 48 hours (Rules 5 & 6).

The hospitals, nursing homes, clinic, dispensary, animal house, pathological lab, etc. are, therefore, required to set in place the biological waste treatment facilities. It is, however, not incumbent that every institution has to have its own waste treatment facilities. The rules also envisage that common facility or any other facilities can be used for waste treatment. However, it is incumbent on the occupier to ensure that the waste is treated within a period of 48 hours. Schedule VI of the rules also provides the time limits by which the waste treatment facilities are required to be in place.

In connection with the implementation of the Rules, it has been decided to take up pilot projects in selected Government hospitals – Central and State.

**AIM:** The aim of the scheme is to implement pilot projects to have a demonstration effect by providing financial assistance to identified hospitals/

institutions under Central/State Governments for:

1. Purchase of equipments such as:
  - a) Incinerator
  - b) Microwave
  - c) Autoclave
  - d) Shredder
2. Other equipments including colour coded bags and puncture proof containers, protective gears, etc.
3. Civil and electrical works to house and operate the waste treatment facilities.
4. Training
5. IEC activities.

Hospital Waste Management System must be established in accordance with the Bio-Medical Waste (Management & Handling) Rules, 1998 (Annexure).

Segregation must be done at the source of generation of waste. As 80-85% of waste generated in hospitals is non-hazardous or general waste, segregation will reduce the quantum of waste that needs special treatment to only 15-20% of the total waste. The categories for segregation of waste and colour coding and type of container should be as in Schedule 1 and 2 of the Bio-Medical Waste (Management & Handling) Rules, 1998.

The various options for treatment of waste can be selected according to feasibility and type of waste as given in the Schedule – I. The correct colour bag should be used for the particular treatment option.

The various options are:

1. **Incineration:** The incinerator installed must



meet the specification and emission standards as given in the Bio-Medical Waste (Management & Handling) Rules, 1998 and must meet the guidelines developed by Central Pollution Control Board for design and construction of bio-medical waste incinerator (circulated to all States/UTs vide letter no. Z.28015/50/2003-H, dated 18.11.2003) – a certificate may be taken from the State Pollution Control Board. Waste category, 1, 2, 3, 5, & 6 as stated in the Schedule – I of the bio-Medical Waste (Management & Handling) Rules, 1998. Wherever common facilities for treatment and disposal of bio-medical waste are available, installation of incinerators by individual hospitals may not be encouraged and such waste should be transported to the common facility for proper treatment.

2. **Autoclaving/Microwaving:** Standards for autoclaving and microwaving are provided in the Bio-Medical Waste (Management & Handling) Rules, 1998. The equipment for autoclaving or microwaving waste should conform to these standards. These options can be selected for waste categories 3, 4, 6, 7 of Schedule – I of the Bio-Medical Waste (Management & Handling) Rules, 1998.
3. **Shredder:** Shredding will cause a reduction in the volume of waste and will also effectively prevent its re-use. It is required for waste category 4 and 7 of the Schedule – I of the Bio-Medical Waste (Management & Handling) Rules, 1998. it should be ensured that waste is disinfected by chemicals/microwaving/autoclaving before shredding.
4. **Needle and Syringe Destroyer:** These units can be used for needles and syringes at the point of use. These will destroy the used needles reducing it to ashes and cut the syringe effectively preventing the re-use.

5. **Transportation of Waste:** Within the hospital in dedicated wheeled containers, trolleys or carts should be used to transport the bins or plastic bags to the site of storage/treatment. The wheeled container should be designed so that waste can be easily loaded, remain secure during transportation, does not have sharp edges and is easy to clean and disinfect.

The assistance will be given direct to the hospital/institute for purchase of equipments for waste treatment facilities/installation of equipment and civil/electrical works to house the waste treatment facilities, training, IEC activities including preparation and publication of literature, posters, pamphlets, etc. The financial assistance will be limited to Rs.85 lakhs per hospital or Rs.1.50 crore per State/UT. The estimated costs are as under:-

1. **Incinerator or Microwave =** Rs.35.00 lakhs
2. **Shredder (Approx. 100 kg to 360 kg./hour) =** Rs.10.00 lakhs
3. **Autoclave (Approx. Cap. Vol. 1015 litres) =** Rs.30.00 lakhs
4. **Waste transportation: Onsite-wheel barrow/wheeled =** Upto max. of container or similar carriage Rs.50,000.00
5. **Civil and Electrical works =** Rs.2.50 lakhs
6. **Literature/IEC/Training of Staff =** Rs.2.00 lakhs
7. **Procurement of equipments like needle shredder** puncture proof containers for sharps, colour coded bags, trolleys, protective gears for staff etc. for Disposal of hospital wastes = Rs.5.00 lakhs

The following eligibility conditions have to be fulfilled for availing of financial assistance:



- i. The application for financial assistance should be forwarded to this Ministry through the State Government/UT Administration concerned.
- ii. The State Government/UT Administration should ensure that the existing facilities are inspected by a responsible officer and deficiencies pointed out. The proposal for additionalities, if any, in the form of equipment should be, as far as possible, by way of complementary equipments supported by estimates of concerned authorities.
- iii. The cost of equipments to be purchased should be indicated. The equipments will be purchased as per prescribed procedure. These will be entered into an Assets Register to be maintained by the hospital.
- iv. The grant will be subject to the condition that the State Government / UT Administration will give an undertaking that adequate arrangements for running the equipments and their maintenance for disposal of hospital waste shall be made.
- v. The grant will be subject to the condition that the State Government/UT Administration/Hospital will give an undertaking that they will provide the required trained manpower for running of the equipments and their maintenance for proper treatment and disposal for the bio-medical waste.
- vi. The funds sanctioned will be utilized for the purpose for which it is sanctioned.
- vii. The accounts of the hospital about purchase of equipment/maintenance of the equipments/transportation of thw waste/ expenditure incurred on civil/electrical works will be audited by the Accountant General of the State Government / UT Administration and its utilization certificate will be forwarded to the Ministry of Health & Family Welfare

within a period of six months after the expiry of the financial year during which the grants is sanctioned.

The financial assistance will be limited to Rs.85 lakhs per hospital or Rs.1.5 crore per State/UT. The State/UTs will have the option to choose any equipment (s) from the list above to cover as many hospitals as possible. However, the financial assistance per State will be provided upto a maximum amount of Rs.1.5 crore.

### **Scrutiny of Applications:**

The applications received from the State Government/UT Administrations for setting up of facilities for disposal of hospital waste in the hospitals under their administrative control will be considered in the Ministry in a Committee headed by Additional Secretary and proposals cleared for giving financial assistance. The proposals then will be processed for sanction of financial assistance to the Government Hospitals/institutes. In the case of Central Government Hospitals/Institutions, the Head of the Institutions may send their proposal through Dte.GHS.

The Joint Secretary (Hospital), DDG level officer in the Dte.GHS concerned with hospitals matters will be the Nodal Officer for implementation of the scheme. The proposals will be examined through a Committee consisting of Additional Secretary, Chairman, the Joint Secretary dealing with hospital matters, Joint Secretary (FA) or his representative, DDG level officer dealing with hospitals in Dte.GHS and one representative of Central Pollution Control Board/Ministry of Environment & Forests as members. The Member Secretary of the Committee will be Director/Deputy Secretary dealing with hospital matters. The funds for setting up facilities for disposal of hospital waste will be sanctioned to the State Government/UT Administration/Occupier and it will be implemented by the concerned Government and to the concerned Head of the Hospital in case of Central Government Hospitals/Institutions.



## Annexure - II

## Referral Laboratory Networks

## Referral Laboratory Network for Advanced diagnostic facilities

	IDSP Level - 4 Labs		North Zone	East Zone	South Zone	IDSP Level - 5 Labs
	Central Zone	South Zone				

## Advance Diagnostic Facilities

Bacterial diagnosis Enteric bacteria: <i>Vibrio cholerae</i> , <i>Shigella</i> , <i>Salmonella</i>		CMC Vellore  Trivandrum Medical College	PGIMER Chandigarh  AIIMS Delhi  CRI Kasauli	RMRC Dibrugarh,  Cuttack Medical College	KEM Mumbai,  AFMC Pune	NICED & NICD
<i>Streptococcus pyogenes</i> and <i>S pneumoniae</i>	Indore Medical College	St. John Medical College, Bangalore	VP. Chest University of Delhi	–	BJ MC	CMC Vellore
<i>C.diphtheriae</i>	BHU	CMC, Vellore	NICD, Delhi	STM, Kolkata	AFMC, Pune	VP Chest Institute, Delhi
<i>Neisseria meningitidis</i> and <i>N. gonorrhoeae</i>	SN Medical College, Agra	State PH Lab Trivandrum	PGIMER Chandigarh	–	Surat Medical College	CMC Vellore & PGIMER Chandigarh
<i>Staphylococcus</i>	BHU	MGR Medical University	Maulana Azad Medical College, Delhi	STM, Kolkata	AFMC, Pune	NICD, Delhi
Leptospirosis	DRDE	Virology Institute, Allepey  Tamil Nadu University, Chennai  VCRC, Pondicherry	AIIMS IVRI	RMRC, Bubaneswar &  Dibrugarh	BJMC	RMRC Port Blair



**Viral Diagnosis**

Enteric viruses	DRDE	CMC, Vellore	AIIMS & Villupuram Chest Institute	NICED Kolkata	—	EVRC, Mumbai, NIV & NICD
Arboviruses	DRDE	CMC, Vellore	AIIMS & NICD Delhi Chest Institute	NICED Kolkata	—	NIV
Myxoviruses	DRDE	CMC, Vellore	AIIMS & NICD Delhi Chest Institute	NICED Kolkata	—	NIV, HSADL Bhopal
Hepatitis viruses	DRDE	CMC, Vellore	AIIMS ICGB, Delhi	NICED Kolkata	—	NIV
Neurotropic viruses	DRDE	CMC, Vellore	AIIMS & NICD Delhi	—	—	NIV NIMHANS
HIV	DRDE	CMC, Vellore	AIIMS	—	—	NARI, NICD & NACO ICGB, Delhi

**Parasitic Diagnosis**

Malaria	All State Public Health Laboratories	MRC, Delhi ICGB, Delhi
Filaria	All State Public Health Laboratories	NVBDCP, Delhi VCRC Pondicherry

**Zoonoses**

Dengue	DRDE	VCRC, Pondicherry Institute of Virology, Alleppey	AIIMS	NICED	NIV	NIV ICGB, Delhi
JE	DRDE	CRME, Madurai & NIMHANS	AIIMS	NICED	NIV	NIV /NICD
		VCRC, Pondicherry				



Plague	DRDE	NICD Bangalore	NICD, Delhi	—	Haffikins Institute	NICD, Delhi
Rickettsial diseases	DRDE	CMC, Vellore	—	—	AFMC	NICD IVRI

### Others of Public Health Importance

Anthrax	DRDE	CMC, Vellore	IGIB	NICED, Calcutta	BJMC	NICD IVRI
Microbial water quality monitoring	NEERI, Nagpur	CMC Vellore,  Trivandrum Medical College	PGIMER Chandigarh  AIIMS, Delhi  CRI Kasauli	RMRC, Dibrugarh, Cuttack Medical College	KEM Mumbai,  HAFFKIN's, Mumbai  AFMC Pune	NICED & NICD

Unknown pathogens	Other laboratories to perform support functions				NIV, NICD, HSADL	
Outbreak investigation support	Medical Colleges and state public health laboratories as L3/ L4				NICD, NIV, NICED, VCRC	
Laboratory data management	Medical Colleges, state public health laboratories and all the L4 & L5 laboratories (in their area of expertise)				NIV, NICD	
Capacity building	All the L4 & L5 laboratories (in their area of expertise)				NIV, NICD	
Quality assurance	All the L4 & L5 laboratories (in their area of expertise)				CMC, TRC, NTI, AFMC, NARI, RMRC, Port Blair NIV, NICD	
Quality control of reagents & kits evaluation	All the L4 & L5 laboratories (in their area of expertise)				CMC, TRC, NARI, RMRC, Port Blair NIV, NICD, BJMC, NICED	
Production & supply of reagents/ kits/ biological/ standard reference materials	—				DRDE, NIV, IVRI, NICED, NICD, MRC, Delhi  AFMC, Pune NARI TRC, Chennai RMRC, Port Blair	
Biosafety & bio- containment	Other laboratories to perform support function				HSADL, NIV/MCC, DRDE, NICD	



### List of Abbreviations

BJMC	BJ Medical College
CHC	Community Health Centre
CME	Continuing Medical Education
CSSD	Central Sterile and Supply Department
CRI	Central Research Institute
CRME	Centre for Research in Medical Entomology
DRDE	Defense Research and Development Establishment
ICGEB	International Centre for Genetic Engineering and Bio-technology
EVRC	Enterovirus Research Centre
FRU	First Referral Unit
HSADL	High Security Animal Diseases Laboratory
IGIB	Institute of Genomics and Integrative Biology
IPHS	Indian Public Health Standards
IVRI	Indian Veterinary Research Institute
KEM	King Edmund Memorial Hospital
MRC	Malaria Research Centre
NARI	National AIDS Research Institute
NEERI	National Environmental Engineering Institute
NICED	National Institute of Cholera and Endemic Diseases
NIV	National Institute of Virology
NRHM	National Rural Health Mission
PRI	Panchayati Raj Institution
RKS/HMC	Rogi Kalyan Samiti / Hospital Management Committee
RMRC	Regional Medical Research Centre
STM	School of Tropical Medicines
VCRC	Vector Control Research Centre



## References

1. Indian Standard Basic Requirement for Hospital Planning; Part 2 Upto 100 Bedded Hospital, Bureau of Indian Standards, New Delhi, January, 2001
2. Rationalisation of Service Norms for Secondary Care Hospitals, Health & Family Welfare Department, Govt. of Tamil Nadu. (Unpublished)
3. District Health Facilities, Guidelines for Development and Operations; WHO; 1998.
4. Indian Public Health Standards (IPHS) for Community Health Centres; Directorate General of Health Services, Ministry of Health & Family Welfare, Govt. of India.
5. Population Census of India, 2001; Office of the Registrar General, India.













Directorate General of Health Services  
**Ministry of Health & Family Welfare**  
Government of India